PALESTINE.

11/38

DEPARTMENT OF HEALTH

◆

ANNUAL REPORT

FOR THE YEAR

1938.

◆

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GOVERNMENT OF PALESTINE

DEPARTMENT OF HEALTH

ANNUAL REPORT FOR THE YEAR 1938.

SECTION I.

GENERAL CONSIDERATIONS.

Administration.

Establishment.

1. The establishment of the Department for the year 1938/39 was increased by the inclusion of the following posts :—

An Assistant Specialist, Grade G, for British Section, Government Hospital, Jerusalem.

Four Medical Officers :

- One for locum tenens for holders of scholarships approved in previous years, but not shown as additional post.
- Three for Officers to be seconded to Trans-Jordan Frontier Force.

Nine British Nursing Sisters :

- Three for British Section, Government Hospital, Jerusalem.
- Two for New Infectious Hospital, Jerusalem.
- Four for New Government Hospital, Haifa.

A Hospital Steward, Grade M, for New Government Hospital, Haifa.

A Disinfecting Mechanic, Grade O(A), for New Government Hospital, Haifa.

A Clerk, Grade O, for New Government Hospital, Haifa.

Ten Graduate Nurses :

- Two for British Section, Government Hospital, Jerusalem.
- Three for New Infectious Hospital, Jerusalem.
- Five for New Government Hospital, Haifa.

A Medical Officer. Four Quarantine Sub-Inspectors, Grade O(B). A Clerk, Grade N. A Disinfecting Mechanic, Grade O(A).	For Quarantine Office, Tel-Aviv.

On the occasion of the celebration of His Majesty's Birthday, Col. G.W. Heron, C.B.E., D.S.O., was appointed to be a Companion of the Most Distinguished Order of St. Michael and St. George.

The title of Assistant Bacteriologist has been changed to Bacteriologist.

Vacancies in the Department's establishment were filled by the appointment of :—

Dr. W.J. Vickers, Senior Medical Officer (Endemic) Grade "F" vice Dr. N.M. Maclennan transferred to British Guiana Colony.

Dr. Frederick B. Turner, Assistant Specialist, Grade G.

Miss L.D. Rae, British Nursing Sister replaced Miss F.I. Channel retired.

Miss Annie Hunter, British Nursing Sister replaced Miss E.I. Crawford resigned.

Miss A.P. Waters, British Nursing Sister. Miss M.H. Etheredge, British Nursing Sister. Miss E.C.T. Hewetson, British Nursing Sister. Miss Sarah Brittan, British Nursing Sister. Miss B.L.J. Gandour, British Nursing Sister. Miss C.R. Lyle, British Nursing Sister. Miss E.M. Stephens, British Nursing Sister. Miss I.M. Fuller, British Nursing Sister.	To complete establishment.
Dr. Hugo Lehrs. Dr. A.S. Bishara.	To complete establishment.

The following was the distribution of staff at the end of the year :—

HEADQUARTERS AND DISTRICT ADMINISTRATION.

Appointment.	*Grade.*	*Name.*	*Station.*
Director of Medical Services.	"C"	Col. G.W. Heron, C.M.G., C.B.E., D.S.O.	Headquarters, Jerusalem.
Deputy Director.	"E"	J.W.P. Harkness, O.B.E.	-do-
Deputy Director (Labs.).	"E"	G. Stuart, O.B.E.	-do-
Senior Medical Officer (Samaria and Galilee).	"F"	W.K. Bigger, O.B.E., M.C.	Nablus.
Senior Medical Officer (Haifa and Quarantine).	"F"	J. Macqueen.	Haifa.
Specialist.	"F"	W.E. Thompson, O.B.E.	Jerusalem.
Senior Medical Officer (Railways).	"F"	J.H. Thompson.	Haifa.
Senior Medical Officer (Jaffa and Gaza Districts).	"F"	Dr. V.L. Ferguson.	Jaffa.
Senior Medical Officer (Jerusalem District).	"F"	J.H. Pottinger.	Jerusalem.
Senior Medical Officer (Sanitary and Epidemic Section).	"F"	W.J.E. Phillips, M.C.	Headquarters, Jerusalem.

Appointment.	*Grade.*	*Name.*	*Station.*
Senior Medical Officer (Endemic Diseases).	"F"	W.J. Vickers.	Headquarters, Jerusalem.
Assistant Specialist.	"G"	F.B. Turner.	Jerusalem.
Assistant Senior Medical Officer.	"H"	D. Boulos, M.B.E.	Jerusalem.
-do-	"H"	R. Oplatka, M.B.E.	Tel-Aviv.
-do-	"H"*	H. Abu Rahmeh, M.B.E.	Amman.
-do-	"H"	M. Shishmanoglou, M.B.E.	Haifa.
-do-	"H"	Z. Haddad, M.B.E.	Jaffa.
Inspector of Pharmacies.	"H"	Farid I. Haddad, M.B.E.	Headquarters, Jerusalem.
Medical Officer i/c Mobile Medical Unit.	**	S.A. Jones.	Amman.
Office Superintendent.	"K"	C. Morrall.	Headquarters, Jerusalem.
Storekeeper.	"L"	M.B. Pinkus.	-do-

HOSPITAL AND MEDICAL SERVICE.

Lady Medical Officer.	—	S.M. Young.	Jerusalem.
-do-	—	J. McDowall.	Haifa.
Meidcal Officer (Hospital).	"K"	Y. Hajjar, M.B.E.	Jerusalem.
Medical Officer (Mental Hospital and District).	"K"	M.S. Malouf.	Bethlehem.
Medical Officer (Casualty Post, Ophthalmic Clinic and Schools).	"K"	S. Bodossian.	Ramle.
Medical Officer (District, Ophthalmic Clinic and Schools).	"K"	A.A. Shehadeh.	Acre.
Medical Officer (Ophthalmic Clinic).	"K"	H.S. Khalidi.	Jaffa.
Medical Officer (Schools).	"K"	K. Kesheshian.	Jaffa.
Medical Officer (Hospital).	"K"	N. Hamzeh.	Haifa.
Medical Officer (Hospital and Ophthalmic Clinic).	"K"	A.T. Sternberg.	Safad.
Medical Officer (Hospital).	"K"	I. Itayim.	Gaza.
Medical Officer, Ophthalmic Clinic).	"K"	S. Shihab.	Hebron.
Medical Officer (Casualty Post, Ophthalmic Clinic and District).	"K"	S. Saleem, O.B.E.	Beersheba.
Medical Officer (Special Clinic).	"K"	F. Abla.	Hebron.
Medical Officer (Ophthalmic and Clinic)	"K"	D.K. Mikhail.	Majdal.
Medical Officer (Ophthalmic).	"K"	M.S. Musa.	Majdal.
Medical Officer (Hospital).	"K"	A. Sururi.	Nablus.
Medical Officer (Hospital).	"K"	S. Bishara.	Jaffa.
Medical Officer (X-Ray duties).	"K"	E. Kleinhaus.	Jerusalem.
Clinical Assistant.	—	R.A.R. Khayri.	Jaffa.
-do-	—	K. Marberg.	Bnei-Beraq.
-do-	—	Salwa Khoury.	Jerusalem.
Matron.	—	Miss L.J. Hanson.	Nablus.
-do-	—	Miss I.G. Cooper.	Haifa.
-do-	—	Miss I.E. Cowan.	Jerusalem.
-do-	—	Miss M.G. Sutherland.	Safad.
-do-	—	Miss W.M. Farrer.	Jaffa.
Matron Mental Hospital No.1.	—	Miss A.A. Byrne.	Bethlehem.
Superintendent of Midwifery.	—	Miss E. Dickin.	Hebron.
-do-	—	Miss E. Davies.	Gaza.
-do-	—	Miss V.W.E. Rogers, M.B.E.	Jerusalem.
-do-	—	Miss C.M. Beville.	Nablus.
-do-	—	Miss L.B. Fielder.	Jaffa.
British Nursing Sisters	—	Miss L.B. Walker.	Jerusalem.
-do-	—	Miss J. Hadden.	Haifa.
-do-	—	Miss A.M. Hunter.	Bethlehem.
-do-	—	Miss J.I.H. Farrer.	Haifa.
-do-	—	Miss W. Wilson.	Bnei Braq.
-do-	—	Mrs. E. O'Rourke.	Jerusalem.

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* Seconded as Director of Public Health, Transjordan.

** Seconded to Transjordan Government.

Appointment.	*Grade.*	*Name.*	*Station.*
British Nursing Sisters	—	Miss E. Wardropper.	Bethlehem.
-do-	—	Miss M.G. Morris.	Safad.
-do-	—	Miss O.E. Collard.	Jerusalem.
-do-	—	Miss E.H. Edwards.	Haifa.
-do-	—	Miss S.G. Raine.	Haifa.
-do-	—	Miss M. McGrail.	Jerusalem.
-do-	—	Miss Annie Hunter.	Haifa.
-do-	—	Miss A.P. Waters.	Haifa.
-do-	—	Miss S. Brittan.	Haifa.
-do-	—	Miss M.H. Etheredge.	Jerusalem.
-do-	—	Miss E.C.T. Hewetson.	Jerusalem.
-do-	—	Miss B.L.G. Gandour.	Haifa.
-do-	—	Miss E.M. Stephens.	Jerusalem.
-do-	—	Miss C.R. Lyle.	Haifa.
-do-	—	Miss L.D. Rae.	Bethlehem.
-do-	—	Miss I.M. Fuller	Jerusalem.

SANITARY AND EPIDEMIC.

Sanitary Engineer.	Spec.	M.Y. Samaha, M.B.E.	Headquarters, Jerusalem.
-do-	-do-	L.T. Colburn.	-do-
Assistant Sanitary Engineer.	"K"	G.R.P. Witts.	-do-
Medical Officer.	"H"	J. Tucktuck.	Nazareth.
-do-	"K"	A. Abdel-Al, O.B.E.	Hebron.
-do-	"K"	K. Abu Ghazaleh.	Nablus.
-do-	"K"	G.E. Ayoub.	Jaffa.
-do-	"K"	K. Eid.	Jaffa.
-do-	"K"	I. Haurani.	Safad.
-do-	"K"	M.A. Shukair.	Jerusalem.
-do-	"K"	Taher el Khatib.	Gaza.
-do-	"K"	S. Btesh.	Haifa.
-do-	"K"	F.I. Haddad.	Haifa.
-do-	"K"	F. Shubeita.	Nablus.
-do-	"K"	A.M. Shehadeh.	Jerusalem.
-do-	"K"	E.S. Sukkarieh.	Ramleh.
-do-	"K"	A.I. Haddad.	Ramallah.
-do-	"K"	H.M. Torian.	Haifa.
-do-	"K"	A.K. Khartabil.	Tulkarm.
-do-	"K"	A. Malchi.	Haifa.
-do-	—	S.N. Barnick.	Tiberias.
-do-	—	Ibrahim Bey Ali Alamuddin.	Headquarters, Jerusalem.
-do-	—	Rafat Amin Faris.	Jerusalem.
-do-	—	S.M. Kathuda.	Jenin.
-do-	—	Karl Roch.	Tel-Aviv.
-do-	—	Elie Many.	Jerusalem.
-do-	—	Assad S. Bishara.	Jerusalem.

QUARANTINE SECTION.

Medical Officer.	"K"	M.K. Mishalany.	Jaffa.
-do-	"K"	B. Franco.	Haifa.
-do-	"K"	Hugo Lehrs.	Tel-Aviv.

LABORATORY SECTION.

Government Analyst.	"G"	G.W. Baker.	Laboratories, Jerusalem.
Senior Bacteriologist.	"H"	K.S. Krikorian.	-do-
Assistant Analyst.	"K"	W.J. Itayim.	-do-
Bacteriologist.	"K"	M.S. Abdul Rahim Dabbagh.	-do-
-do-	"K"	Rudolph Reitler.	Laboratories, Jaffa.
-do-	"K"	J.M. Shapiro.	Laboratories, Haifa.

Training of Personnel.

2. 14 Probationer Nurses of the Department completed their training and qualified as Graduate Nurses.

7 Graduate Nurses and 10 pupil midwives were trained and awarded the Certificate of Midwifery.

Two Nurses had a four months' course at the St. John's (Ophthalmic) Hospital at Jerusalem.

14 Classes in First Aid were held. The following passed the examinations :—

	Certificates	Vouchers	Medallions	Labels
Department of Health Personnel	21	3	3	2
Police	117	10	5	5
Others	60	4	4	1
Total	198	17	12	8

A Departmental elementary course in sanitation was held during February and March. 32 candidates attended the course, of whom 9 passed the examination.

ORDINANCES.

Ordinances and Regulations.

3. The following Ordinances, Regulations, Rules, etc., affecting Public Health were promulgated during 1938 :—

	Published in Gazette No.
PUBLIC HEALTH (RULES AS TO FOOD) ORDINANCE.	
Conferring power and imposing duty on Medical Officers to condemn and destroy food unfit for human consumption.	770 24.3.38.
Weights and measures to be expressed in terms of the metric system.	774 14.4.38.
RATES AND TAXES (EXEMPTION) ORDINANCE.	
Exemption of public and charitable property from municipal taxes and urban property taxes, including hospitals, clinics, etc.	792 30.6.38.

RULES, ORDERS, ETC.

PUBLIC HEALTH ORDINANCE.	
Order applying part XI of the Ordinance and rules made thereunder to Kafr Ana.	797 14.4.38.
TRADES AND INDUSTRIES (REGULATION) ORDINANCE.	
I. Order applying the trade and industries specified in classes I and III of Schedule I of the Ordinance to Balat, Nablus subdistrict.	761 24.2.38.
II. Amendment of Schedule I B by the substitution of :	785 26.5.38.

(a) "Dyeworks, laundries and dry cleaning establishments and establishments and depots receiving clothing or other material for dyeing, laundry and dry cleaning purposes 500 mils."

for (b) :

"I. Dyeworks 500 mils.

II. Laundry and dry cleaning establishments 500 mils."

	Published in Gazette No.
III. Notice to include certain area south of Jaffa including Bat Yam Local Council.	787 2.6.38.
IV. Order to apply classes I and II of Schedule I to the Ordinance to:	792 30.6.38.
(a) Hamana Village.	
(b) Masmiya Kabira Village.	
(c) Beer Tobia Village.	
CUSTOMS TARIFF AND EXEMPTION ORDINANCE.	
I. Amendment to the schedule by the insertion of the following words in paragraph (c) of item 769 thereof "and blankets, sheets, pillow cases, towels and patients' clothing intended for use within a hospital or asylum and not for distribution".	764 3.3.38.
II. 1. Exemption from customs dues on	786 30.5.38.
(a) Optical appliances.	
(b) Anti-Malaria drugs.	
2. and imposition of duty on	
(a) Medical and surgical appliances.	
(b) Cotton surgical dressings.	
(c) Epsom salt.	
(d) Drugs other than anti-malaria drugs.	
III. Addition to the Schedule. Disinfectants ad valorem 12%.	797 14.7.38.
PUBLIC HEALTH (STANDARD OF FOOD STUFFS) (AMENDMENT) RULES.	
Inapplicabiliy of rule 10 to condensed milk in a receptacle having gross weight exceeding 2 kg.	774 14.4.38.
PUBLIC HEALTH (IMPORTED MEAT) RULES.	832 27.10.38.
MUNICIPAL CORPORATION (SEWAGE, DRAINAGE AND WATER) ORDINANCE.	
Notice applying the Ordinance to Gaza.	797 14.4.38.
PALESTINE (DEFENCE) ORDER IN COUNCIL.	
Burial of members of His Majesty's Forces who died in Palestine and issue of Certificates of Death and of Burial.	825 13.10.38.
ANIMAL DISEASES ORDINANCE.	
I. Rules prohibiting the import of frozen meat from Europe.	771 31.3.38.
II. Importation of carcasses from European countries, Rules.	
TOWN PLANNING ORDINANCE.	
Jerusalem zoning schedule by laws.	774 14.4.38.
INTOXICATING LIQUORS (AMENDMENT) RULES.	
Manufacture of citrus wine	753 27.1.38.
EDUCATION (AMENDMENT) RULES.	
Submission of plans of schools on demand by the Director of Education or Medical Officer of Health before licensing.	784 26.3.38.

	Published in Gazette No.
THE GENEVA CONVENTION, 1906, (MANDATED TERRITORIES) ORDER IN COUNCIL, 1937.	
Limiting the use of "Red Cross" or "Geneva Cross".	774 14.4.38.
RULES OF COURT.	
Allowance to Medical Practitioners, Sections 166, 180 and 182.	755 31.1.38.
Notice by Commissioner for Migration and Statistics regarding the registration of British births.	779 26.5.38.
MEDICAL PRACTITIONERS ORDINANCE.	
Order fixing the maximum number of licences to be issued in 1939.	850 29.12.38.

MUNICIPAL AND LOCAL COUNCIL BY-LAWS.

ACRE MUNICIPAL BY-LAWS. (a) Markets. (b) Slaughter of Animals. (c) Burial of Animals. (d) Storage of Refuse. (e) Abating of Nuisance.	749 13.1.38.
GAZA (WATER SUPPLY) BY-LAWS.	803 4.8.38.
JAFFA CLEANSING OF DRAINS AND CESSPITS BY-LAWS.	825 13.10.38.
RAMLEH WATER SUPPLY BY-LAWS.	793 7.7.38.
PETAH TIQVA BUILDING BY-LAWS.	790 16.6.38.
HERZLIA LOCAL COUNCIL BY-LAWS. (a) Burial of Animals. (b) Storage of Refuse. (c) Abating of Nuisance.	792 30.6.38.

4. The following is a summary of the estimates of expenditure for the financial year 1938/39 :— **Revenue and Expenditure.**

REVENUE.		EXPENDITURE.	
1-4-38 to 31-3-39	**£P. 35,847**	**A. Personal Emoluments**	**£P. 146,336**
		B. Other Charges	**83,637**
		C. Special Expenditure	**15,673**
			£P. 245,646

DETAILS OF OTHER CHARGES.

	£P.
Transport and Travelling	11,590
Railway Fares and Freight	2,100
Lighting, Heating and Electrical Supply	3,886
Equipment and Medical Supplies	13,475
Disinfectants and Maintenance of Disinfecting Machines	2,942
Hospital Diets	19,929
Clothing	2,579
Upkeep of Mechanical Transport	1,200
Epidemic Outbreaks	200
Antimalarial Measures	4,877
Medical Attendance in Private Hospitals	1,360
Officers undergoing Medical Examination in United Kingdom	100
Relief	25
Contribution to Jewish Health Services	12,353
Contribution to Tropical Diseases Bureau	60
Contribution to Seamen's Hospital	11
Contribution to Colonial Medical Fund	100
Contribution to London School of Hygiene and Tropical Diseases	200
Fees for Notification of Births and Deaths in Villages	600
Medical Library	105
Expenses to Officers attending Courses of Instruction	100
Telegrams, Telephones and Postage	1,870
Grant to Trans-Jordan Government	900
Contribution to Palestine Railways for Part Time Services of M.O. on Kantara-Rafa Line	170
Typewriters and Duplicators	155
Samples of Foodstuffs	50
Scholarships	400
Water Supply	100
Passages	2,000
Contingencies	200

DETAILS OF SPECIAL EXPENDITURE.

Motor Ambulance	520
Tentage	150
Matting and Frames for Shelters	50
Village Sanitation	500
Drainage of Birket Ramadan	1,300
Light Disinfecting Vans	250
Equipment and Medical Supplies for new or extended Hospitals	3,547
Laundry Equipment	468
Renewal of Unserviceable Furniture for Government Hospitals and Dispensaries	175
Plants, Vegetables and Flower Seeds	25
Equipment and Furniture for new Government Hospital, Haifa	4,913
Grant to Hebrew University Hospital	3,100
Compressor for Refrigerating Plant	75
Disinfecting Machines	400
Equipment and Furniture for Quarantine Office, Tel-Aviv	200

The comparative total figures of estimates of revenue and expenditure for previous years are given below :—

Year	Revenue	Expenditure £P.		
		Personal Emoluments	Others Charges	Total
1937-38	27,785	128,941	86,282	215,223
1936-37	31,806	133,282	109,549	242,831
1935-36	18,450	111,192	99,870	211,062
1934-35	14,200	102,659	59,044	161,703
1933-34	11,540	89,734	47,420	137,154
1932-33	10,330	81,050	33,951	115,001
1932 (1st Quarter)	2,488	19,785	7,591	27,376
1931	9,950	79,140	32,201	111,341
1930	9,860	76,143	32,408	108,551
1929	10,353	73,694	29,885	103,579
1928	10,480	76,080	31,380	105,460
1927 (9 months)	7,320	52,948	24,955	77,903
1926-27	13,830	68,987	28,692	97,679
1925-26	9,050	63,140	21,341	84,481
1924-25	9,570	61,791	20,362	82,423
1923-24	11,590	64,226	29,032	93,258
1922-23	8,720	72,508	32,860	105,368
1921-22	8,158	70,914	82,795	153,709*

* Less estimated cost of Railway Medical Service — £P.10,824

The Palestine Government estimates of revenue and expenditure for the financial year under review was as follows :—

Revenue	£P.4,520,145
Expenditure	£P.5,445,760

The estimated expenditure of the Department is, therefore, 4.5% of the total estimated expenditure of the Government.

FINANCE.

General.

5.—(I) The estimates of the Department showed an apparent increase from £P.215,223 in 1937/38 to a figure of £P.245,646. A number of items under Personal Emoluments were, however, subsequently deleted on revision, and effected an economy of £P.4,869. Various factors contributed to the increase :—

(a) Matrons' and British Nursing Sisters' salaries were converted to a consolidated rate, and were subject to deduction, accruing to revenue, for rations and accommodation causing an increase of £P.4,917 ;

(b) Upkeep of mechanical transport, £P.1,200, was transferred from the Public Works Department to this Department's estimates;

(c) A Quarantine Service for Tel-Aviv, at a cost of £P.2,114, was instituted and is balanced by receipts ;

(d) Special expenditure increased principally on account of equipment and furniture for New Government Hospital, Haifa, £P.2,377 ;

(e) Provision for equipment and medical supplies for new and extended Hospitals amounted to £P.3,328 and for laundry and disinfecting equipment to £P.708. These were required in particular for the new infectious hospital, Jerusalem, and the extension of the British section, Bute House, to provide for Army wives and families and the expanded British police force;

(f) An increase in medical attendance in private hospitals to provide, principally, for dental treatment for the expanded Police Force and for their families.

(II) The new developments in the Department's services were limited to :—

(a) The completion of the construction and equipping of the new Haifa Hospital for which £P.50,079 was provided and its further expansion at a cost of £P.7,100 for construction and £P.1,300 for equipment, to meet the present and future need of the Army married families and infectious cases amongst Army and R.A.F. The Hospital is now completed and occupied, but there are outstanding amounts, within the above credit, of £P.12,228 to be carried forward to 1939/40 to effect payments of the final accounts of the principal contractor after the one year's guarantee period ;

(b) The construction at a cost of £P.16,500 for the building, and £P.1,212 for equipment of a 22 bedded Infectious Hospital at Jerusalem, where no Infectious Hospital previously existed and where it was required to provide for infectious diseases amongst Army families and British Police.

(c) The expansion of the British Section at Bute House by 18 beds at a cost of £P.627 for alteration, and £P.1,035 for equipment.

(III) The principal additional recurrent costs were on account of :—

(a) Extra staff, diets, fuel and light over a period of 6 months for the new Government Hospital, Haifa. The addition to the staff included a British Hospital Steward, a Mechanic, 3 British Nursing Sisters and X-Ray Sister, 5 Staff Nurses and subordinate staff at a cost of £P.3,586.

(b) The staff, diets, etc., for the new Infectious Hospital, Jerusalem, for a period of 6 months at a cost of £P.2,337 ;

(c) The additional staff, diets, etc., for the expanded Bute House. An Assistant Specialist, 3 British Nursing Sisters, 2 Staff Nurses and subordinate staff were necessary at a cost of £P.3,627 ;

(d) A complete Quarantine Service for the Port of Tel-Aviv including Medical Officer, Quarantine Sub-Inspectors, Nurse, etc., at a cost of £P.2,114.

This expenditure was met by equivalent revenue from the Marine Trust Company Limited, Tel-Aviv ;

(e) A part-time Medical Officer at £P.180 in Tel-Aviv to deal with medical examination and inoculation of immigrants ;

(f) A Medical Officer and Medical Orderlies for the Acre Detention Camp.

Credits did not permit the expansion of any other departmental services, so that the situation remained the same as regards the postponed projects, namely, Tuberculosis Hospital-Sanatorium and District Dispensaries, new Mental Hospital, expansion of Nablus Hospital to meet increased population, construction of Ramleh Hospital, expansion of Safad Hospital, Maternity Block at Jaffa.

The Hospital and Clinic Services of the Department continued without any cessation on account of disturbances. Many casualties were dealt with in the hospitals and there was a larger attendance at both general and ophthalmic and special outpatients clinics. The attendance at venereal disease clinics alone expanded from 37,020 to 42,161.

Village Sanitation.

6. The conditions prevailing in the country together with a considerable reduction in financial provision reduced to a bare minimum any extension of the scheme of village latrine construction. Over 25,000 latrines of the bore-hole and tar-barrel type have been installed at a cost of £P.13,422 during the last seven years, some quarter of the cost being borne by the householders concerned. The repair and evacuation of 77 latrines previously installed was effected.

Antimalarial Projects.

7. The Public Health Services were also carried on uninterruptedly, and the expenditure of £P.4,877 on malaria measures was effective in keeping this disease in control.

The first section of the filling of Birket Ramadan, consequent on damage done by burning of the peat, was carried out at a cost of £P.1,300.

Although no new major scheme of antimalarial drainage was undertaken various schemes, previously undertaken, were maintained and improved. The rural population, both Arab and Jew, contributed in labour to the extent of 75,171 labour days and cleared 987,848 kilometres of drain ditch and wadi.

Various.

8. One ambulance was stolen and destroyed by an armed gang and several typewriters were stolen from District Health Offices. Otherwise the buildings and property of the Department were not interfered with.

Internment Camps, situated at Acre, Sarafand and Bethlehem, were provided with medical services.

Jewish Health Services.

9. The Hospital and Dispensary Services for the Jews were carried out principally by the Hadassah and Kupat Cholim Hospitals and Clinics, and Private Hospitals. The Government Hospitals, although open to all communities, have, owing to the political situation, been even less used by the Jewish community. All infectious cases, except in Jerusalem, and to a limited extent at Tel-Aviv, were accommodated in Government Hospital Infectious Sections at Haifa, at Bnei-Beraq north of Tel-Aviv and at Safad.

The incidence of infectious disease and particularly of enteric fever was remarkably small amongst the Jewish population.

The new University Hadassah Hospital was completed during the year, but not occupied. It occupies a commanding site on the Mount of Olives and provides for the offices of the Hadassah Medical Organization, 300 beds for patients including surgical, medical, gynaecology and maternity, children, etc., and laboratories, X-Ray and Therapy departments and nurses' home.

The School and Infant Welfare Services continued to be conducted satisfactorily and completely by the Kupat Cholim and Hadassah, aided by Government grants. Each Colony of any size has its medical officer, clinic and nursing service.

A Quarantine Service was organized and conducted by the Department of Health for the Tel-Aviv Port. The offices and disinfecting station were constructed to our design by the Marine Trust Limited. A limited number of immigrants can be dealt with provided that there is no disease on the ship or at a previous port of call which necessitates observation of immigrants or passengers in quarantine.

PUBLIC HEALTH.

General.

10. Adverse conditions and increasing poverty among the urban and rural population might reasonably have been expected to have resulted in increased sickness, but happily such has not been the case. In fact, the general health of the people was more satisfactory on the whole than in the previous year.

The Arabs in the towns were especially affected by adverse economic conditions, diminution of building and other enterprise, restriction of transport and absence of tourists.

Rationing on a considerable scale was resorted to in the Old City of Jerusalem. The Department's Infant Welfare Staff of the Old City assisted by volunteers, carried this out with great devotion and enthusiasm.

The Jews, assisted by external funds, have not felt the pinch to the same extent as the Arabs. That they suffered from an economic depression is undoubted, but this latterly was balanced somewhat by increased activities resulting from the new Tel-Aviv Port, the steadying of the building trade and the employment of numerous Jews by the Army either on constructional work, in the automobile trade or as supernumerary police.

The personnel of the Department, senior and junior, carried out their duties without interruption in spite of the disturbances and risk to themselves.

Birth and Death Rates.

11. The total death rate was 15.03 per 1000 of the population compared to 18.88 in 1937.

The birth rate was 39.90 per 1000 compared with 41.54 in 1937.

The infant mortality rate per 1000 births was 112.05 compared to 152.84 in 1937.

Owing to the disturbed state of the country and difficulty of communication between villages and District Health Offices in towns, there was some interruption in the notification of village births and deaths for registration in the latter part of 1938.

It is clear, however, that, apart from any falling off due to failure to register, there was a real decrease in the number of deaths as compared with 1937.

The same observations are true of infant mortality. The fall from 179.31 per 1000 births to 127.61 in the case of the Moslem population is too great to be true and must be partly attributed to failure to register.

The Jewish rates were steadier at 57.2 in 1937 and 58.5 in 1938.

The recorded natural increase was higher than in any previous year except 1936.

Epidemic and Endemic Diseases.

Enteric.

12. The incidence of 1.643 typhoid cases with 155 deaths compares favourably with 2,049 cases with 194 deaths in 1937 .

Nablus, Tulkarm and Jenin districts were responsible for the greatest number of cases, and the Nablus Hospital had to be expanded from 85 to 130 beds to take in typhoid cases, chiefly from villages.

The Jews, previously the chief reservoir of typhoid, suffered little from this disease.

Typhus.

13. There were 176 cases of the mild murine type, exclusively amongst Jews.

Measles.

14. The number of cases fell from 7,594 in 1937 to 3,219 in 1938. Extensive whole blood prophylaxis carried out in three districts no doubt contributed to the reduction in cases.

Cerebro-Spinal Meningitis.

15. The disease showed a satisfactory decline from 44 cases with 23 deaths to 14 cases with one death.

Malaria.

16. The malaria incidence was negligible in towns, and in controlled areas in rural districts. Uncontrolled areas are now reduced to Lake Huleh, Jordan River south of Lake Tiberias, and Naamein River marshes south of Acre.

Antimalarial Work.

17. There was no cessation in antimalarial measures, either urban or rural. In the case of the latter, mixed areas of Jews and Arabs were sometimes a problem, but the difficulties in all cases were surmounted by voluntary Arab or Jewish labour with guards, or by Departmental labour.

Each village and colony carried out, under our supervision, its task allotted under the Antimalaria Ordinance.

The difficult Tiberias Lake Shore work, the Jisr-el-Mejamie control, the Wadi Rubin and Birket Ramadan and other control of completed major schemes were carried out without hitch.

Jewish Medical Services.

18. The Kupat Cholim and the Hadassah Medical Organization and the Municipal Hospital of Tel-Aviv continued to provide the bulk of the general hospital and outpatient services for Jews. The latter receives an annual grant-in-aid from Government, and the two former receive grants for Infant Welfare and School Medical Services.

With few exceptions, infectious cases are accommodated in Department of Health Infectious Hospitals or Sections. The incidence of infectious diseases was not high amongst Jews during the past year.

Hospital Accommodation.

19. The New Haifa Hospital, on its magnificent site facing the sea at Ras-el-Krum, was completed in August in the scheduled time of 14 months. Transfer of patients and equipment from the old temporary hospital buildings took place in September and it was completely equipped and occupied before the official opening by His Excellency the High Commissioner in December.

The bedstrength is 220 including 76 isolation, and accommodation is provided for all nursing and subordinate staff, laboratories, X-Ray and Therapy and outpatients. Installations are modern in almost every respect and include steam plant for sterilizers, laundry, kitchen and disinfecting machine, complete hot water supply, lifts for passengers, patients and food, and a battery of Aga Cookers. The operating theatres are air conditioned, and each ward and floor is insulated with pumice brick. The building consists of six storeys constructed in reinforced concrete, with cantilevered balconies.

All wards face to the prevailing wind from the west and are provided throughout with broad balconies.

The cost of construction was £P.119,100 including the expansion authorized for Army wives and families and the cost of equipment for the beds and staff quarters additional to those of the old hospital, and for special surgical and medical accessories, was £P.9,951.

The cost of maintenance of the hospital is estimated at £P.20,000 per annum with full complement of patients.

In virtue of the very large expansion of the British Section of the Police and of the necessity of providing for emergency Army cases and for Army wives and families two other projects were carried out, namely :

(a) The expansion of the British Section, Jerusalem Hospital by 18 beds, and

(b) The construction of the first stage of an Infectious Hospital at Jerusalem.

(a) was completed during the year by adapting the British Sisters' and Nurses' quarters which were situated in the same building as the British Section, and leasing two other buildings for the nursing staff. The expansion has proved very satisfactory and is already fully occupied.

(b) was due for completion within the year, but delays were occasioned by the murder of the foreman of works and strikes. The Infectious Hospital building provides for administration and nurses' quarters block, one observation pavilion of eight and one of fourteen beds. A wooden hut to accommodate 20 additional beds was transferred from the old Haifa Hospital and erected. The latter will assist in providing for infectious cases amongst the general population.

Developments affecting Public Health, Water Supplies, etc.

20. There was no material advance in development of water supplies.

The Consulting Engineer's Report on the Haifa Water Supply was received and advocated the development of the Jelami and Wadi Fellah sources. The temporary supplies provided by the Hadar Hacarmel and Mouchly Companies are very expensive and only adequate for present needs.

The Jerusalem Water Supply operated satisfactorily and was uniformly pure.

Jaffa proceeded with its temporary extension from the Ajami bore.

Village Sanitation.

21. Owing to the existing financial stringency and general unrest in rural areas comparatively little progress is to be recorded in the installation of village latrines during the year under review. Further extension in this direction will continue to be made, however, as funds permit, as the results in the areas dealt with have been very satisfactory, both from an educational and a public health standpoint. Householders, in fact, now ask for latrines and readily carry out essential sanitation measures. These latrines are of the bore-hole or the tar-barrel pattern.

Experience continues to show the importance of radical improvement of village and house sanitation as a vital factor in the control of such diseases as acute conjunctivitis and hookworm infestation.

Ophthalmic Service.

22. The mobile ophthalmic unit with a Medical Officer and two ophthalmic nurses accommodated in the trailer operated throughout the year in Majdal district. The thirty-one special first aid ophthalmic posts in villages under medical orderlies carried on their functions under the central ophthalmic clinics in Hebron, Majdal, Gaza and Ramleh and were well attended.

Acute purulent conjunctivitis was less severe and owing to the readily available treatment, the percentage of corneal ulcer again diminished.

The intensive ophthalmic campaign is definitely proving its value, and no doubt the complete village latrine installation in Majdal, Jaffa and Gaza subdistricts and Infant Welfare Centres in 4 villages in Hebron sub-district have assisted materially. We want many more of both the former and the latter before we can hope to cope successfully with acute conjunctivitis.

The special clinics and units dealt with 64591 new cases of ophthalmic disease and 945129 attendances of which 26917 cases were acute purulent conjunctivitis and 989 corneal ulcers resulting therefrom.

The ophthalmic section of general clinics dealt with 7707 new cases, and there were 2807639 attendances in schools.

Infant Welfare.

23. Both the town centres under graduate nurses and the Arab village centres under midwife-nurses had record attendances. Only in Hebron, where one of the nurses was threatened, had we to close down.

The British Superintendents of Midwifery, who supervise the town and village centres, had to be withdrawn from Hebron and Gaza districts and, for a time, from Jaffa, on account of insecurity.

The issue of relief rations in Jerusalem was carried out for upwards of 8,000 people through the infant welfare centre to which many voluntary helpers rallied. In Jaffa and in Haifa modified relief to women and children was carried out up to the limit of the credits available.

The Jewish centres carried on their functions very satisfactorily and provided service in almost every Jewish settlement, chiefly from funds subscribed by the members of the Kupat Cholim and by the Hadassah Medical Organization.

Improvement in Hospital Facilities.

24. At Nablus, expansion was urgently required to meet the increased incidence of enteric fever and the general increase of surgical cases resulting from the disturbances. An adjoining house was leased for the nurses, and their quarters within the hospital utilized for fifteen additional patients.

Extension of the sick bay at the Prison at Acre was approved to allow of the separate accommodation of Jewish cases from amongst the interned persons. This construction was commenced and will provide six additional beds. The accommodation, in general, at the sick bay was inadequate on account of the number of cases from the internment camp.

A scheme was put forward to expand Safad (Infectious) Hospital to provide separate accommodation for ten British Police, in view of the large increase of this force on the Northern Frontier Road and Eastern Boundaries.

There was no increase of the Mental Hospital accommodation of 157 patients. The waiting list is now 262.

Tuberculosis.

25. Although tuberculosis is undoubtedly one of the important endemic diseases in Palestine, control continued to be concentrated in the special clinics at Jerusalem, Haifa and Jaffa, as the modified hospital cum sanatorium scheme prepared as a result of the survey carried out in 1935 had to be deferred again on economy grounds. Thus hospitalization was only possible in a very few instances. Only in the case of the Jews who appear to provide some 30% of the cases is definite hospital accommodation available. The Safad Tuberculosis Hospital, providing 58 beds, was again subsidized by the Department of Health.

The special hospital clinics did much valuable work, however, in the palliative field. 7,854 attendances were recorded with 302 new cases. Of these, 235 were of the pulmonary type and 67 non-pulmonary. Notified deaths (all forms of tuberculosis) were 221 as compared with 234 in 1937 and 201 in 1936. 359 artificial pneumo-thorax inductions and refills were carried out during the year with three phrenocectomies. There is no doubt that the population in general would respond actively to an organized service of treatment and control. The attendances recorded are very encouraging in view of the difficulties and dangers of travel during the period under review.

Hookworm.

26. A further section of this report will indicate the measures taken in the continuation of the anti-hookworm campaign in spite of the troubled state of the country. It will be seen that one of the most important phases in this campaign, the question of sanitary control in rural areas, again received due attention. The marked effect of treatment on the reduction of the infestation rate is indicated. The very important factor of re-infection had again to be postponed, however, as no adequate control of the citrus industry was possible owing to terrorist activities in the areas covered by this employment. Bore-hole latrines for the workers in the orange groves where promiscuous defaecation is common are proposed.

Bilharzia.

27. Here again the special unit of investigation worked under exceptional difficulty. The investigation started in 1937 which showed definite endemic foci in three areas in the southern district was continued in an effort to establish the fact whether infestation exists amongst the population as a whole. It is probable that schistosomiasis is not restricted to certain specified areas of the country although a very low incidence only can exist amongst the general population.

Syphilis and Venereal.

28. A further section of this report will indicate that the campaign against the endemic syphilis in the Hebron sub-district continued satisfactorily until the latter part of the year when increasing lack of security led to a suspension of the work in that area.

The venereal clinics at Jerusalem, Jaffa and Haifa continued to be well supported, a rise of 5,550 attendances being shown over last year in spite of the difficulties prevailing. There has been a rapid and progressive development in this section of the department's work in recent years.

Gynaecology.

29. The work under the two Lady Medical Officers was carried on successfully in the two principal centres—Haifa and Jerusalem. The subsidiary clinics at Acre, Nablus, Ramallah and Jaffa were not held all the year owing to restrictions in travel.

The high number of attendances again indicated their popularity, and the increased number of treatments of venereal amongst women is encouraging.

Trades and Industries and Public Health (Rules as to Food) Ordinance.

30. The health standard of industries dealing with food was maintained, and a much closer control of quality was possible under the Public Health (Rules as to Food) Ordinance. Local milk and butter supplies still require improving, but certain firms are showing the way towards that improvement.

No less than 19089 trade premises were inspected and licensed during the year and conditions laid down in the case of all new applicants.

The organization of inspection and control is a big one but of great value to the health of the population.

With the strict application of conditions both under the Town Planning Ordinance in the case of each new building and under the Trades and Industries Ordinance in case of scheduled trades, the sanitation, both in private and trade buildings has now reached a very good standard.

Municipal Sanitary Services.

31. Great credit is due to the Sanitary Surveyors of the principal towns for the way they carried out their duties in the midst of strikes and disturbances. Public services generally were carried out without dislocation. As an instance of difficulty one may mention the serious wounding with intent to murder of the Assistant Sanitary Surveyor of Haifa and the murder of the second assistant.

Disposal of refuse was still unsatisfactory at Haifa where the destructors were inadequate to deal with all refuse, and "controlled" dumping was not sufficiently controlled.

At Jaffa and Tel-Aviv dumping was continued and was equally unsatisfactory.

At Jerusalem disposal by burning was very well carried out.

The water supplies of Jerusalem and Tel-Aviv and the partial supply at Jaffa were satisfactory. Haifa remained without a municipal water supply but was adequately, though expensively, catered for by private firms.

An extension of the supply at Jaffa was commenced. The Jerusalem supply was quite satisfactory both in quantity and quality. A large number of smaller Arab towns and Jewish colony supplies were conducted satisfactorily.

The large number of village supplies put in by Government during the last few years proved of great value to the people.

Drainage

32. The slaughterhouse section of the main drainage of Haifa, with temporary outfall, was completed. There has not been any commencement of the main scheme, and the temporary outfall outside the break water remains.

The Bethlehem Road section of the main drainage of Jerusalem was completed and connects up to the Military Barracks and the recently completed married quarters.

SECTION II.

VITAL STATISTICS AND COMMUNICABLE DISEASES.

A. Administrative.

Registration of Births and Deaths.

33.—(1) Registration of births and deaths at the District Offices of the Department of Health is compulsory. The registration is effected on the basis of a form of notification, copies of which are supplied to all doctors and midwives, and in rural areas to the mukhtars (headmen) of villages.

In towns, the notification of births is effected almost entirely by doctors and midwives or licensed dayas, and the notification of deaths by doctors. No burial can lawfully be effected in those towns in which there is a District Health Office without a burial permit obtained from that office. The permit is issued free of charge on receipt of a notification of death in which the cause of death is certified by a medical practitioner. In cases where the cause of death is unknown, or not so certified, a burial permit is not issued without the authority of the Coroner.

In villages, information of the occurrence of births is given by the parent, midwife, or registered daya, to the mukhtar, who completes the notification form for transmission to the Health Office of the District. Similarly, on the occurrence of a death the mukhtar is informed by the relatives, or person present at the time of death, and the particulars recorded by him for notification to the Health Office. In the case of deaths occurring in a village, burial may be effected without obtaining a Burial Permit from the District Health Office. In order to secure accuracy of records in village areas mukhtars receive payment for each notification of a birth or death made by them. In rural areas it is not possible as yet to obtain certification of the cause of death by medical practitioners.

Prior to 1938 the compilation of statistics was performed monthly in each District Health Office. Returns were submitted to the Office of the Director where the annual statistics for the whole country were compiled. At the beginning of 1938 the compilation of vital statistics was undertaken by the Office of Statistics. At the same time new notification forms were introduced, the range of questions asked being widened and the form re-designed to facilitate the compilation of the material by mechanical tabulation. The information on each form is expressed numerically by the process of coding — carried out in the District Health Offices. The original notification form, after the birth or death notified thereon has been registered and coding completed, is sent by the Medical Officer through the Senior Medical Officer to the Government Statistician. In the Office of Statistics, machine cards are punched, one for each birth or death, and the tables of statistics are made up by machine sorting of these cards and by mechanical tabulation. The new system has made it possible to tabulate a wider range of material than before, and the resulting statistics have been published quarterly in the form of stencilled bulletins by the Government Statistician.

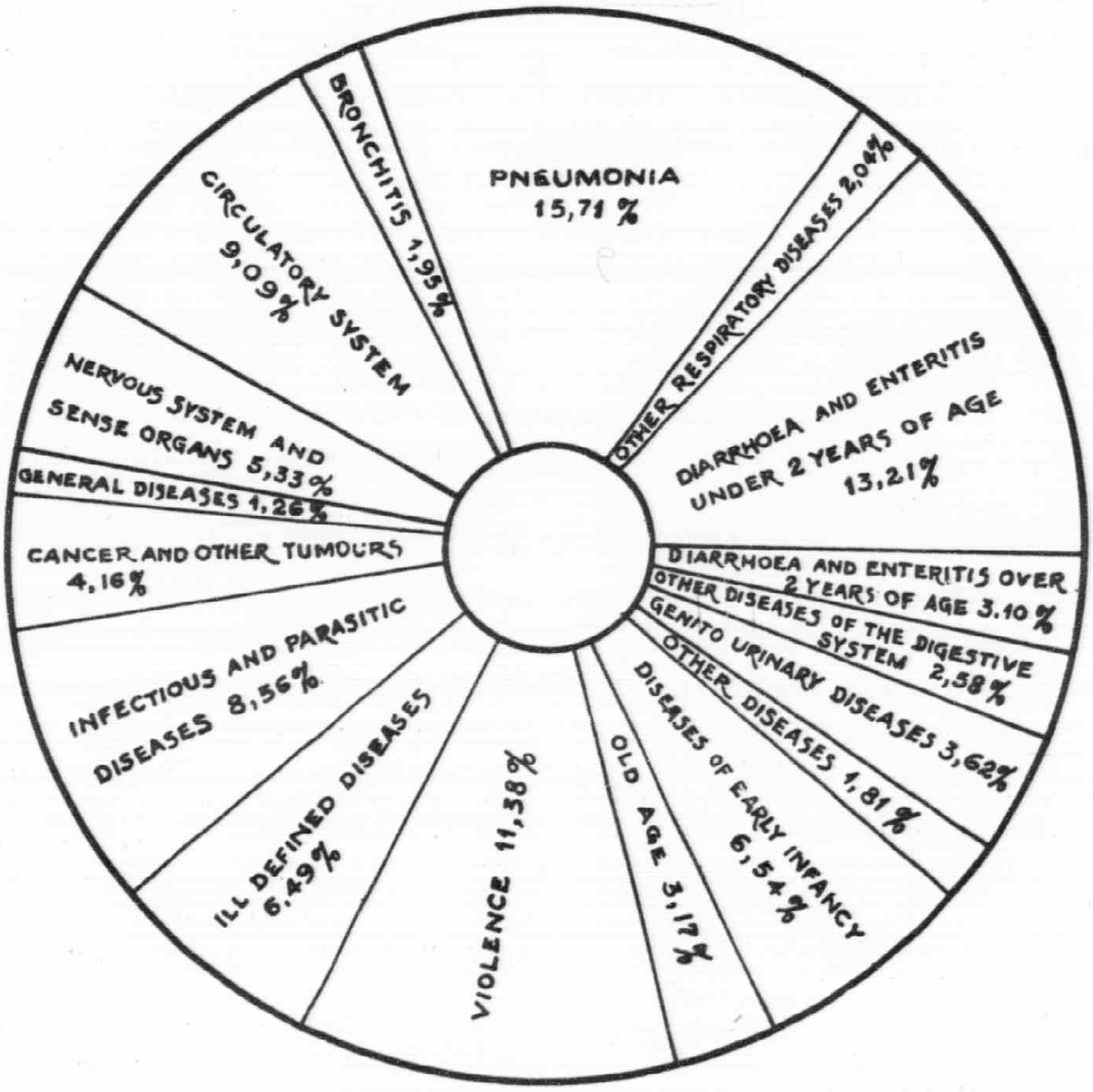
Owing to the disturbed conditions in the rural areas of the country there was some interruption in the notification of village births and deaths for registration in the latter part of 1938. It is not possible to estimate how many births and deaths failed to be registered. Evidence of this interruption is greatest in the village areas of Hebron, where death registrations in the latter half of the year were 261 as compared with 641 in the first half, and birth registrations were 841 as compared with 1,285. In other districts the evidence is less pronounced and it is undoubted that apart from any falling-off due to failure to register there was a real decrease in the number of deaths actually taking place as compared with the high figures of 1937.

(2) The following tables show the number of Births, Deaths and Infant Deaths registered in the four main Medical Districts of the country, together with the causes of death actually occurring in the eighteen towns shown in previous annual reports.

The ages of persons who died are given in each case, together with the figures of the previous year for purposes of comparison. A summary of this table, giving the total births and deaths registered in the towns and villages, and a further summary by religions are also attached.

PROPORTION OF DEATHS, BY PLACE OF OCCURRENCE, FROM EPIDEMIC, ENDEMIC, SYSTEMATIC AND OTHER DISEASES SHOWN AS PERCENTAGE OF TOTAL DEATHS IN 18 TOWNS OF PALESTINE IN 1938.

TOTAL DEATHS — 8,609.



BIRTHS, DEATHS AND INFANT MORTALITY, 1938.

Town, Village or District	Jerusalem	District	Ramallah	District	Bethlehem	District	Hebron	District	Beersheba
DEATHS.									
Under 1 month	128	76	3	74	18	15	62	40	7
1 to 3 months	46	74	2	55	15	15	31	52	5
3 to 6 months	81	91	7	63	26	12	35	45	10
6 to 12 months	120	101	12	80	32	32	78	81	4
Under 1 year	375	342	24	272	91	74	206	218	26
0 to 5 years	563	710	31	468	103	139	393	613	69
5 to 10 years	52	16	1	21	4	4	19	49	5
10 to 15 years	25	9	—	14	3	5	4	12	8
15 to 20 years	44	5	1	16	1	3	7	8	5
20 to 25 years	55	11	—	11	5	6	1	7	3
25 to 30 years	70	14	—	13	6	2	9	17	5
30 to 35 years	55	21	1	15	4	2	6	10	11
35 to 40 years	61	9	2	17	1	1	4	16	7
40 to 45 years	55	8	2	11	1	1	5	17	7
45 to 50 years	39	13	—	14	4	8	7	11	1
50 to 55 years	50	8	2	11	2	2	4	6	5
55 to 60 years	60	6	1	10	3	4	3	9	2
60 to 65 years	82	16	2	20	9	3	8	13	8
Over 65 years	504	116	15	90	40	38	73	113	13
Unknown	1	4	—	—	—	—	—	1	—
Total Deaths 1938	1716	966	58	731	186	218	543	902	149
Total Deaths 1937	1702	1262	49	958	163	210	460	1355	92
BIRTHS.									
Total Births 1938	4090	2496	169	1570	291	514	1174	2126	190
Total Births 1937	3841	2282	138	1620	297	502	1227	2727	173
INFANT MORTALITY.									
Rate per 1000 Births 1938	91.69	137.02	142.01	173.25	312.71	143.97	175.47	102.54	136.84
Rate per 1000 Births 1937	91.90	211.66	130.43	213.58	228.96	175.30	140.99	132.75	236.99

BIRTHS, DEATHS AND INFANT MORTALITY, 1938.

Town, Village or District	Jaffa	District	Tel-Aviv	Ramleh	District	Gaza	District	Majdal	District
DEATHS.									
Under 1 month	78	61	107	23	51	49	79	26	105
1 to 3 months	44	30	19	7	56	33	23	12	53
3 to 6 months	82	46	34	22	49	27	60	13	55
6 to 12 months	150	80	72	35	86	91	84	34	80
Under 1 year	354	217	232	87	242	200	246	85	293
0 to 5 years	585	447	304	132	564	370	559	142	639
5 to 10 years	27	22	14	4	25	34	34	1	19
10 to 15 years	30	12	7	4	17	19	10	—	20
15 to 20 years	17	10	17	2	3	11	4	—	13
20 to 25 years	39	14	31	3	16	12	6	3	13
25 to 30 years	64	28	52	6	18	8	8	2	11
30 to 35 years	52	33	37	6	15	10	17	3	17
35 to 40 years	40	23	46	6	13	8	15	3	12
40 to 45 years	40	18	35	6	21	4	10	2	16
45 to 50 years	21	14	36	2	17	9	5	—	16
50 to 55 years	35	19	40	3	15	16	11	—	17
55 to 60 years	30	25	66	7	3	4	7	—	6
60 to 65 years	47	39	97	5	21	14	16	6	20
Over 65 years	167	165	366	42	121	84	91	25	120
Unknown	—	—	1	1	—	1	—	1	1
Total Deaths 1938	1194	869	1149	229	869	604	793	188	940
Total Deaths 1937	1356	966	918	292	1412	719	871	233	1152
BIRTHS.									
Total Births 1938	2690	3434	3587	583	2696	1378	1897	442	2436
Total Births 1937	2536	4039	2950	559	2845	1383	1959	405	2284
INFANT MORTALITY.									
Rate per 1000 Births 1938	131.60	63.19	64.68	249.23	89.76	145.14	129.68	192.31	120.28
Rate per 1000 Births 1937	175.08	67.84	60.68	214.67	145.52	176.43	155.69	288.89	237.30

BIRTHS, DEATHS AND INFANT MORTALITY, 1938.

Town, Village or District	Haifa	District	Acre	District	Nazareth	District
DEATHS.						
Under 1 month	93	64	13	60	12	27
1 to 3 months	53	39	10	32	8	47
3 to 6 months	50	30	13	27	12	26
6 to 12 months	83	51	16	38	21	52
Under 1 year	279	184	52	157	53	152
0 to 5 years	438	323	74	328	103	226
5 to 10 years	37	13	5	18	4	11
10 to 15 years	37	14	4	13	4	3
15 to 20 years	32	11	3	9	2	4
20 to 25 years	43	22	20	13	3	4
25 to 30 years	70	27	16	22	5	12
30 to 35 years	63	26	8	27	10	13
35 to 40 years	65	28	3	22	7	20
40 to 45 years	44	13	5	22	3	5
45 to 50 years	44	10	—	13	6	11
50 to 55 years	58	20	10	6	3	9
55 to 60 years	46	9	5	13	5	8
60 to 65 years	60	22	6	12	9	6
Over 65 years	180	104	38	96	22	36
Unknown	10	1	—	—	—	—
Total Deaths 1938	1227	643	197	614	186	368
Total Deaths 1937	1311	853	207	924	285	599
BIRTHS.						
Total Births 1938	3657	2058	451	1786	440	1327
Total Births 1937	3441	2425	421	1957	551	1369
INFANT MORTALITY.						
Rate per 1000 Births 1938	76.57	89.41	115.30	87.91	120.45	114.54
Rate per 1000 Births 1937	102.30	125.36	182.90	212.57	156.08	153.40

BIRTHS, DEATHS AND INFANT MORTALITY, 1938.

Town, Village or District	Nablus	District	Tulkarm	District	Tiberias	District	Safad	District	Jenin	District
DEATHS.										
Under 1 month	22	102	7	95	11	46	8	44	6	108
1 to 3 months	16	65	3	58	5	27	4	50	—	56
3 to 6 months	19	53	5	81	8	35	7	62	6	48
6 to 12 months	48	99	9	123	12	36	24	77	8	89
Under 1 year	105	319	24	357	36	144	43	233	20	301
0 to 5 years	205	615	51	653	65	247	77	412	34	518
5 to 10 years	36	33	2	24	8	16	9	18	1	26
10 to 15 years	27	21	3	11	2	11	8	13	—	17
15 to 20 years	9	9	2	7	5	8	11	9	—	12
20 to 25 years	13	21	1	14	10	10	6	14	1	9
25 to 30 years	21	13	4	24	17	26	10	20	2	24
30 to 35 years	14	15	1	24	10	19	6	25	3	18
35 to 40 years	19	35	3	20	10	19	7	24	—	8
40 to 45 years	16	19	1	10	8	17	5	14	1	12
45 to 50 years	15	14	4	12	5	12	2	20	4	18
50 to 55 years	16	23	3	12	6	12	1	9	1	16
55 to 60 years	8	20	—	7	4	8	2	6	—	6
60 to 65 years	18	26	1	11	8	11	7	12	2	29
Over 65 years	60	87	8	101	28	56	31	53	3	72
Unknown	2	—	—	—	—	3	—	1	—	—
Total Deaths 1938	479	951	84	930	186	475	182	650	52	785
Total Deaths 1937	517	1562	91	1096	222	703	175	850	62	1257
BIRTHS.										
Total Births 1938	1013	2455	321	2598	477	1096	396	1664	149	2279
Total Births 1937	923	2910	292	2583	410	1169	389	1631	131	2380
INFANT MORTALITY.										
Rate per 1000 Births 1938	103.65	129.94	74.77	137.41	75.47	131.39	108.59	140.02	134.23	132.08
Rate per 1000 Births 1937	119.18	175.94	143.84	175.76	160.98	183.06	107.97	231.15	137.40	217.23

SUMMARY OF BIRTHS AND DEATHS, 1938.

	Total for 18 Towns by place of occurrence.	Total for Districts excluding Beersheba.
DEATHS.		
Under 1 month	673	1,047
1 to 3 months	313	732
3 to 6 months	457	783
6 to 12 months	849	1,189
Under 1 year	2,292	3,751
0 to 5 years	3,739	7,461
5 to 10 years	263	349
10 to 15 years	185	202
15 to 20 years	169	131
20 to 25 years	249	191
25 to 30 years	367	279
30 to 35 years	300	297
35 to 40 years	292	282
40 to 45 years	240	214
45 to 50 years	199	208
50 to 55 years	255	196
55 to 60 years	246	147
60 to 65 years	389	277
Over 65 years	1,699	1,459
Unknown	17	11
Total Deaths — 1938	8,609	11,704
Total Deaths — 1937	8,854	16,030
BIRTHS.		
Total Births — 1938	21,498	32,432
Total Births — 1937	20,067	34,682
INFANT MORTALITY.		
Rate per 1000 Births — 1938	106.61	115.66
Rate per 1000 Births — 1937	127.07	167.75

Religions	Christians	Moslems	Jews	Others	Totals	Percentages
Population	111,165	826,448	402,244	11,782	1,351,639	
DEATHS.						
Under 1 month	112	1,314	275	19	1,720	—
1 to 3 months	47	926	64	8	1,045	—
3 to 6 months	95	1,044	95	6	1,240	—
6 to 12 months	143	1,699	184	12	2,038	—
Under 1 year	397	4,983	618	45	6,043	—
0 to 5 years	569	9,669	854	108	11,200	55.2
5 to 10 years	35	518	51	8	612	3.0
10 to 15 years	29	325	29	4	387	1.9
15 to 20 years	21	213	59	7	300	1.5
20 to 25 years	37	289	109	5	440	2.2
25 to 30 years	58	412	169	7	646	3.2
30 to 35 years	52	403	137	5	597	2.9
35 to 40 years	31	402	131	10	574	2.8
40 to 45 years	35	323	88	8	454	2.2
45 to 50 years	45	278	81	3	407	2.0
50 to 55 years	40	297	113	1	451	2.2
55 to 60 years	41	186	165	1	393	1.9
60 to 65 years	58	357	248	3	666	3.3
Over 65 years	340	1,771	1,025	22	3,158	15.6
Unknown	1	18	3	6	28	0.1
Total Deaths — 1938	1,392	15,461	3,262	198	20,313	100.0
Deaths per 1000 — 1938	12.51	18.71	8.11	16.81	15 03	—
Deaths per 1000 — 1937	13.95	24.86	7.72	22.85	18.88	—
BIRTHS.						
Total Births — 1938	3,818	39,050	10,563	499	53,930	—
Births per 1000 — 1938	34.35	47.25	26.26	42.35	39.90	—
Births per 1000 — 1937	33.65	49.82	26.47	44.13	41.54	—
INFANT MORTALITY.						
Total Deaths under 1 Year 1938	397	4,983	618	45	6,043	—
Rate per 1000 Births — 1938	103.98	127.61	58.51	90.18	112.05	—
Rate per 1000 Births — 1937	127.34	179.31	57.20	179.13	152.84	—

BIRTHS AND DEATHS REGISTERED IN EACH MEDICAL DISTRICT AND SUB-DISTRICT, (PLACE OF OCCURRENCE). 1936-38.

Medical District and Sub-District	BIRTHS			DEATHS		
	1936	1937	1938	1936	1937	1938
TOTAL	56,993	54,749	53,930	20,465	24,884	20,313
JERUSALEM MEDICAL DISTRICT	13,407	12,807	12,620	5,482	6,251	5,469
Jerusalem Town	3,977	3,841	4,090	1,719	1,702	1,716
Jerusalem Villages	2,482	2,282	2,496	882	1,262	966
Ramallah Town	178	138	169	49	49	58
Ramallah Villages	1,790	1,620	1,570	608	958	731
Bethlehem Town	281	297	291	195	163	186
Bethlehem Villages	549	502	514	205	210	218
Hebron Town	1,263	1,227	1,174	576	460	543
Hebron Villages	2,701	2,727	2,126	1,167	1,355	902
Beersheba Town	186	173	190	81	92	149†
JAFFA MEDICAL DISTRICT	19,742	18,960	19,143	6,731	7,919	6,835
Jaffa Town	2,771	2,536	2,690	1,207	1,356	1,194
Jaffa Villages	3,416*	4,039*	1,412	867*	966*	487
Tel Aviv Town	3,736	2,950	3,587	1,135	918	1,149
Tel Aviv Settlements	—	—	2,022	—	—	382
Ramle Town	656	559	583	217	292	229
Ramle Villages	2,747	2,845	2,696	840	1,412	869
Gaza Town	1,312	1,383	1,378	578	719	604
Gaza Villages	2,002	1,959	1,897	677	871	793
Majdal Town	470	405	442	192	233	188
Majdal Villages	2,632	2,284	2,436	1,018	1,152	940
HAIFA MEDICAL DISTRICT	10,283	10,164	9,719	3,275	4,179	3,235
Haifa Town	3,676	3,441	3,657	1,160	1,311	1,227
Haifa Villages	2,172	2,425	2,058	671	853	643
Acre Town	425	421	451	207	207	197
Acre Villages	1,981	1,957	1,786	674	924	614
Nazareth Town	553	551	440	227	285	186
Nazareth Villages	1,476	1,369	1,327	336	599	368
SAMARIA—GALILEE MEDICAL DISTRICT	13,561	12,818	12,448	4,977	6,535	4,774
Nablus Town	1,064	923	1,013	491	517	479
Nablus Villages	2,738	2,910	2,455	1,101	1,562	951
Tulkarm Town	330	292	321	86	91	84
Tulkarm Villages	2,707	2,583	2,598	830	1,096	930
Tiberias Town	475	410	477	163	222	186
Tiberias Villages	1,273	1,169	1,096	484	703	475
Safad Town	437	389	396	186	175	182
Safad Villages	1,762	1,631	1,664	719	850	650
Jenin Town	139	131	149	49	62	52
Jenin Villages	2,636	2,380	2,279	868	1,257	785
SUMMARY:—						
Towns	21,929	20,067	21,498	8,518	8,854	8,609
Villages	35,064	34,682	32,432	11,947	16,030	11,704

(*) Includes Tel-Aviv Settlements.

(†) Includes 58 deaths in Beersheba Villages.

DEATHS IN 18 TOWNS DURING 1930-38, CLASSIFIED ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH.

Cause of Death	1930	1931	1932	1933	1934	1935	1936	1937	1938
1. Typhoid and Para-Typhoid Fevers	61	84	130	104	200	213	147	201	172
2. Exanthematic Typhus	—	—	1	1	—	1	1	3	3
3. Small-Pox	—	1	—	—	—	—	—	—	—
4. Measles	73	92	79	47	244	88	56	105	87
5. Scarlet Fever	—	4	2	1	1	2	—	—	—
6. Whooping Cough	9	9	3	8	10	4	19	5	11
7. Diphtheria	13	14	17	18	37	44	26	31	19
8. Influenza	34	13	39	19	52	19	16	6	9
9. Plague	1	—	—	—	—	—	—	—	—
10. Tuberculosis of the respiratory system	167	176	145	181	180	146	147	153	157
11. Other forms of Tuberculosis	64	77	64	89	90	74	48	58	50
12. Syphilis	34	45	38	33	25	25	23	26	17
13. Malaria	30	21	17	23	38	35	14	19	16
14. Other infectious and parasitic diseases	111	138	130	165	237	308	265	215	195
15. Cancer and other malignant tumours	163	184	181	203	214	257	310	288	319
16. Tumours, non-malignant, or of which the nature is not specified	14	9	9	18	23	23	24	23	39
17. Chronic rheumatism and gout	2	4	1	2	6	8	3	10	6
18. Diabetes mellitus	33	44	36	36	63	60	63	59	44
19. Alcoholism (acute or chronic)	—	—	—	1	1	1	2	—	—
20. Other general diseases and chronic poisonings	92	100	88	95	95	110	108	100	102
21. Progressive locomotor ataxia and general paralysis of the insane	1	2	1	3	1	7	3	1	1
22. Cerebral haemorrhage, cerebral embolism and thrombosis	214	215	203	234	257	246	336	296	332
23. Other diseases of the nervous system and of the organs of special sense	85	84	103	103	121	134	135	143	126
24. Diseases of the heart	418	425	499	538	557	565	663	660	636
25. Other diseases of the circulatory system	85	79	93	116	124	118	123	133	147
26. Bronchitis	200	213	285	211	256	211	153	146	167
27. Pneumonia	1,448	1,632	1,581	1,532	1,653	1,638	1,541	1,865	1,353
28. Other diseases of the respiratory system (tuberculosis excepted).	123	80	113	129	170	181	191	178	176
29. Diarrhoea and enteritis.	1,511	1,569	1,777	1,477	1,866	1,741	1,386	1,626	1,404
30. Appendicitis	13	9	22	18	29	23	26	16	14
31. Diseases of the liver and biliary passages	70	58	57	68	70	66	76	70	71
32. Other diseases of the digestive system	127	128	150	138	168	207	167	188	137
33. Nephritis	242	248	256	260	154	272	246	274	276
34. Other diseases of the genito-urinary system	22	20	24	25	47	51	74	49	36
35. Puerperal septicaemia	14	25	22	24	23	46	28	31	15
36. Other diseases of pregnancy, childbirth and the pueperal state	65	51	49	47	50	60	74	51	41
37. Diseases of the skin and cellular tissue and the bones and organs of locomotion	40	27	41	40	50	56	48	55	56
38. Congenital debility and malformations, premature birth and other diseases of early infancy	557	556	634	652	551	721	729	596	563
39. Senility	247	224	271	261	324	287	327	229	273
40. Suicide	24	17	23	10	35	34	35	38	50
41. Homicide	23	30	40	35	39	33	26	63	638
42. Violent or accidental deaths (suicide and homicide excepted)	221	206	202	235	409	375	510	400	292
43. Causes of death not specified or ill-defined	116	175	206	162	288	328	349	434	559
TOTAL	6,767	7,088	7,632	7,352	8,758	8,819	8,518	8,854	8,609

B. Vital Statistics.

General.

34. In presenting statistics of population this year, the estimated end-of-year populations have been tabled, together with the annual increases due to natural increase and to migration. This form of population accounting is followed since it is then very easy to check the figures of growth from year to year; estimates from mid-year to mid-year are less convenient. As a basis for birth rates, etc., a "mean" population has been constructed, a weighted average of the five "end-of-the-quarter" populations. This step is taken in order to eliminate the effect of possible abnormalities in the mid-year population due to seasonal movements of migration.

In compiling the statistics of vital occurrences of 1938 for publication, the previous system of classification into four main religious groups, Moslems, Jews, Christians and Others has been adhered to. In the case of regional figures however, two innovations have been made. Firstly, the statistics have been compiled according to the place of residence of the mother in the case of births and the place of residence of the deceased in the case of deaths, whereas in previous years they were compiled according to place of registration, in effect the place of occurrence. Secondly, the territorial divisions adopted are the sub-districts of the District Administration, the divisions being those adopted at the population census of 1931. Estimates of present population are based on these same areas.

These innovations have been made in order to compare the statistics of births and deaths with the population of each region and so to construct regional birth and death rates. The purpose of regional rates is to give an indication of the relative fertility and mortality of different regions and in each case the actual place of occurrence of the event is of less importance than the usual place of residence of the person concerned.

POPULATION.

35. Including the Beduin tribes as enumerated at the 1931 census, but not including members of His Majesty's Forces, the population of Palestine at the end of the year 1938 has been estimated to be 1,435,285. During the year 1938 the natural increase was estimated to be 33,617 and the net decrease by migration, 126. The detailed development of the population in recent years is shown in the following table :—

		Total	Moslems	Jews	Christians	Others
Population :—						
31st Dec.	1934	1,210,554	814,379	282,975	102,407	10,793
	1935	1,308,112	836,688	355,157	105,236	11,031
	1936	1,366,692	862,730	384,078	108,506	11,378
	1937	1,401,794	883,446	395,836	110,869	11,643
	1938	1,435,285	900,250	411,222	111,974	11,839
Natural Increase :						
	1935	31,691	22,095	7,119	2,239	238
	1936	36,528	25,919	7,738	2,524	347
	1937	29,865	20,170	7,294	2,156	245
	1938	33,617	23,589	7,301	2,426	301
Increase by Migration :						
	1935	65,867	214	65,063	590	—
	1936	22,052	123	21,183	746	—
	1937	5,237	546	4,464	207	20
	1938	—126	—6,785	8,085	—1,321	—105

The recorded natural increase was higher than in any previous year except 1936. On the other hand there was actually a net loss by recorded migration. The net Jewish immigration of 8,085 persons was more than outweighed by the net emigration of other communities.

The average density of population over the whole of Palestine was 40 persons per square kilometre in 1931, and this density is estimated to have increased to about 51 persons per square kilometre in 1936. It must be remembered, however, when comparing this figure with that of European countries, that Palestine, in common with its neighbours, has a large area of desert. The present Beersheba sub-district carries a sparse population of only 4 persons per square kilometre and there is no immediate prospect of this density being increased. The remainder of the country, 13,742 square kilometres in area, had in 1931 an average density of 71 persons per square kilometre, and this density is estimated to have increased to 93 persons per square kilometre in 1936.

The population at the census of 1922 and at the census of 1931 was divided among the various geographical regions as follows :—

DISTRIBUTION AND DENSITY OF POPULATION ACCORDING TO GEOGRAPHICAL REGIONS.

Region	Area (Sq. Km.)	Population		Density (persons per sq. km.)	
		1922	1931	1922	1931
1. Maritime Plain	2,928	209,830	344,137	71	118
2. Acre Plain	316	15,225	18,405	48	58
3. Esdraelon	351	10,629	12,504	30	36
Jezreel	65	2,521	5,566	39	86
4. Judaean Hills	6,005	335,133	457,619	56	76
Wilderness	1,051	11,483	10,922	11	10
5. Galilee Hills	2,083	85,472	109,568	41	52
6. Jordan Valley	681	8,329	11,995	12	18
Hula Basin	262	3,306	14,023	—	54
7. Beersheba	12,577	75,254	51,082	—	4
All Palestine	26,319	757,182	1,035,821	29	40

The largest region, apart from Beersheba, and the most populous, is formed by the hills of Judaea and Samaria. The density of population over this area was 56 persons per square kilometre in 1922 and 76 persons per square kilometre in 1931. The next most populous area was, in 1931, the maritime plain, with 344,000 inhabitants. The coastal plain has the highest density of any region, namely 118 persons per square kilometre. Moreover, the increase from census to census was numerically and proportionately greater than in the hills. The great increase by immigration since 1931 has gone very largely into the coastal plain and this area now approaches the central hills in total population, and greatly surpasses the latter region in density. Agricultural development particularly in orange growing has been more rapid in the plain than in the hills in recent years, and it is believed that some migration from the hills to the plain has taken place.

A. *Urban Population.*

The population of Palestine has probably always been predominantly rural. The scarcity of industries and the comparatively limited opportunities for trading which existed before the Great War did not favour the growth of cities, and except for Jerusalem, which owed its importance largely to its religious associations, there was no town with as many as fifty thousand inhabitants at the time of the 1922 census. The population of the twenty-two municipalities (1) and the town of Tel Aviv at that time numbered 264,000, or about 34.9 per cent of the total population. Nine years later the same towns counted a total of 387,000 inhabitants, 37.4 per cent of the total population. An estimate of the population in 1935, suggests that in that year the town population had further risen to 539,000, or 42.7 per cent of the total. (2) The great growth is largely due to Jewish immigration, of which roughly three quarters has found its way to the towns. The growth of the urban population, and the proportion of the total population to be found in the towns, can be studied, for each religion, in the following table :—

GROWTH OF THE URBAN POPULATION AND ITS PROPORTION OF THE TOTAL POPULATION, BY COMMUNITIES.

Religion	1922 (Census)	1931 (Census)	1935 (estimated)
Population of 23 towns (thousands)			
All religions	264	387	539
Moslems	139	188	222
Jews	68.5	128.5	234
Christians	55	69	81.5
Others	1.5	1.5	1.5
Town population as proportion of total (per cent)			
All religions	34.9	37.4	42.7
Moslems	23.5	24.8	26.9
Jews	81.9	73.6	73.0
Christians	75.4	75.8	78.8
Others	16.7	14.8	13.8

Although the doubling of the total urban population since 1922 has been due, in greatest measure, to the Jewish increase, the Moslem and Christian town populations have also increased largely, and the urban proportion in each of these two communities has increased. The Moslem population is still mainly rural, the urban proportion having increased from 23.5 per cent in 1922 to 26.9 per cent in 1935. These figures are evidence of a migratory movement from the villages to the towns, particularly to the three large towns of Jerusalem, Jaffa and Haifa. The Christian population is the most urban of all, and the urban proportion of Christians increased from 75.4 per cent in 1922 to 78.8 per cent in 1935. In contrast to the increasing urbanisation of the Arab population, the Jewish rural proportion has tended to increase, and while in 1922 81.9 per cent of all Jews were to be found in the towns, this proportion had been lowered to 73.6 per cent in 1931, and further lowered to 73.0 per cent in 1935. The growth of the Jewish rural population has produced several large Jewish centres, notably Petah Tiqva, Hedera, Rehovot and Rishon le Zion. These centres have developed from settlements that were originally entirely agricultural, but they have now acquired commercial and industrial significance, and exhibit as many urban characteristics as the smaller Arab towns.

B. *Rural Population.*

The settled rural population lives in villages, the isolated farms of the New World being almost unknown. The Arab village block is a dense built-on area, houses being built of stone in the hills and of mud bricks in the plain. There is little cultivated land in the village block, the inhabitants going to work in the fields, a distance that may be as great as several kilometres. The village site is usually a high piece of ground, chosen probably for reasons of defence, and the height tends to increase with time owing to the accumulation of refuse. The sites of ancient and abandoned villages are easily distinguishable in flat country, because of the mound or tel, which they gradually built up during the period of their habitation.

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(1) Acre, Beersheba, Beisan, Beit Jala, Bethlehem, Gaza, Haifa, Hebron, Jaffa, Jenin, Jerusalem, Khan Yunis, Lydda, Majdal, Nablus, Nazareth, Ramallah, Ramle, Safad, Shafa 'Amr, Tiberias and Tulkarm.

(2) Memoranda for Palestine Royal Commission, Mem. I, p. 7.

The Jewish settlements present a different appearance. In the communal settlements, where the land, the livestock and the agricultural implements are held by the settlement as a whole, the members of the settlement have their living quarters in large central buildings. In the settlements of individual farmers it is usual to have each house set in a piece of cultivated ground.

The nomadic population are tent-dwellers, many of whom migrate seasonally in search of employment, or of pasture for their animals.

The number of rural inhabitants of each of the main geographical regions, at the census of 1922 and again at the census of 1931, is shown in the following table. The most populous rural region is that of the central range, followed by the coastal plain. The increase in the inter-censal period was greatest on the maritime plain, and there has been a further large increase in recent years. Hula Basin had a large area in Palestine at the later census date, owing to the cession of land by Syria. The Beersheba figures for 1922 are not thought to be reliable.

RURAL POPULATION ACCORDING TO GEOGRAPHICAL REGIONS.

Region	Rural Population	
	1922	1931
1. Maritime Plain	116,889	189,109
2. Acre Plain	8,805	10,508
3. Esdraelon	7,992	9,798
Jezreel	580	2,465
4. Judaean Hills	202,381	266,052
Wilderness	11,483	10,683
5. Galilee Hills	60,049	79,946
6. Jordan Valley	8,329	11,678
Hula Basin	3,306	14,023
7. Beersheba	72,898	48,123
All Palestine	492,712	642,385

POST-WAR GROWTH OF POPULATION BY COMMUNITIES.

In 1920 the population of Palestine was officially estimated to be 673,000 persons, (1) this total being made up of 521,000 Moslems, 67,000 Jews, 78,000 Christians and 7,000 others. The census of October 23rd, 1922 gave a population of 752,000, and that of 1931 gave a total population of 1,036,000. The official estimate at 30th June, 1936, was 1,337,000, the religious composition being as follows:—

POST-WAR GROWTH OF POPULATION, BY COMMUNITIES

Religion	Census 23.10.22 (2)	Census 18.11.31	Estimate 30.6.36 (2)
All religions	752,048	1,035,821	1,336,518
Moslems	589,177	759,712	848,342
Jews	83,790	174,610	370,483
Christians	71,464	91,398	106,474
Others	7,617	10,101	11,219

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(1) Census of Palestine, 1922, p. 3.

(2) Not including members of His Majesty's Forces.

Over the whole post-war period the Moslem population has steadily increased at a rate of about 2.6 per cent per year. At this rate of increase a population would double itself in about 27 years. The Moslem population reached 848,342 in 1936, representing nearly 64 per cent of the total population.

The Jewish population at the census of 1922 numbered 83,790, or 11 per cent of the total population at that date. The Jewish population rose rapidly to 149,540 at the middle of 1926, remained practically stationary until 1928, emigration nullifying the effect of natural increase, and then rose steadily to 174,610 at the census of 1931. The number of Jews more than doubled in the nine years, the gain being equivalent to a steady increase of 8.4 per cent per year. In the period from the census of 1931 to 30th June, 1936, the Jewish population again doubled, an average rate of increase of 19.7 per cent per year. In mid-1936 it reached the figure of 370,483, of 27.7 per cent of the total population.

The Christian population has increased steadily from 1922 to 1936 at an average rate of 3 per cent per year. At this rate a population would double itself in 24 years.

MEAN SETTLED POPULATION, 1938.

TOWNS AND VILLAGES.

Place of residence	Mean Settled Population	Place of residence	Mean Settled Population
TOTAL	1,351,600		
SOUTHERN DISTRICT.		HAIFA-SAMARIA DISTRICT	
Gaza	19,400	Tulkarm	5,900
Khan Yunis	4,500	Nathanya	3,100
Majdal	7,400	Tulkarm Villages	55,600
Gaza Villages	72,400	Nablus	19,700
Beersheba	3,400	Nablus Villages	59,600
Beersheba Villages	—	Jenin	3,200
Jaffa	76,400	Jenin Villages	46,700
Tel Aviv	125,500	Haifa	101,600
Petah Tiqva	15,400	Shefa' 'Amr.	3,300
Jaffa Villages	73,500	Hadera	4,500
Ramle	12,100	Haifa Villages	56,900
Lydda	14,000		
Rishon le Zion	5,600	GALILEE-ACRE DISTRICT	
Rehovoth	7,000		
Ramle Villages	58,300		
		Nazareth	10,000
		Affule	1,400
JERUSALEM DISTRICT.		Nazareth Villages	23,600
		Beisan	3,400
Hebron	18,800	Beisan Villages	14,800
Hebron Villages	55,500	Tiberias	9,900
Bethlehem	7,300	Tiberias Villages	21,400
Beit Jala	3,100	Acre	8,800
Bethlehem Villages	8,400	Acre Villages	44,700
Jerusalem	127,600	Safad	9,800
Jerusalem Villages	47,100	Safad Villages	33,800
Jericho and Villages	4,100	Outside Palestine	—
Ramallah	5,000	Not stated	—
Ramallah Villages	38,100		
		SUMMARY	
		Towns	637,100
		Villages	714,500

The mean settled population, on which crude birth and death rates have been calculated, does not include the Beduin tribes. This population for 1938 was calculated to be 1,351,639, consisting of 826,448 Moslems, 402,244 Jews, 111,165 Christians and 11,782 Others.

Births, Deaths and Infantile Mortality.

36. The following table shows the total number of births, deaths and infant deaths, and the corresponding rates for the past five years :—

Year	Mean settled population	No. of births registered	No. of Deaths registered	Deaths of Infants (Under 1 year)	Birth rate per 1,000 Population	Death rate per 1,000 Population	Infant Mortality rate (per 1,000 live births)
1934	1,106,134	45,942	24,136	7,245	41.53	21.82	157.70
1935	1,196,019	53,940	22,249	7,092	45.09	18.60	131.48
1936	1,270,984	56,993	20,465	6,929	44.84	16.10	121.58
1937	1,318,077	54,749	24,884	8,368	41,54	18.88	152.84
1938	1,351,639	53,930	20,313	6,043	39.90	15.03	112.05

Among the different religious communities, the birth rates, death rates, and infant mortality rates in the past five years have been as follows :—

		All Religions	Moslems	Jews	Christians	Others
Birth rate: (per 1,000 of population)	1934	41.53	46.58	30.03	33.50	41.80
	1935	45.09	52.59	30.64	35.45	42.82
	1936	44.84	53.13	29.67	36.22	51.05
	1937	41.54	49.82	26.47	33.65	44.13
	1938	39.90	47.25	26.26	34.35	42.35
Death Rate: (per 1,000 of population)	1934	21.82	26.70	9.47	16.25	31.00
	1935	18.60	23.48	8.53	13.93	21.00
	1936	16.10	19.98	8.82	12.59	20.08
	1937	18.88	24.86	7.72	13.95	22.85
	1938	15.03	18.71	8.11	12.52	16.81
Infant Mortality Rate: (per 1,000 live births)	1934	157.70	175.34	77.96	152.62	202.67
	1935	131.48	148.10	64.15	125.81	177.73
	1936	121.58	136.17	68.85	113.72	129.37
	1937	152.84	179.31	57.20	127.34	179.13
	1938	112.05	127.61	58.51	103.98	90.18

Both birth and death rates were lower in 1938 than in any previous year for which statistics are available. As compared with 1937, the Moslem birth-rate showed a fall of 2.57 per thousand, the Jewish birth-rate showed a very slight fall, from 26.47 to 26.26 per thousand, and the Chirstian birth rate showed a slight rise. It will be noted that birth rates are all considerably higher than those prevailing in European countries. The preponderance of Moslems is sufficient to establish a very high birth rate, but Palestine stands at the head of all high birth rate countries. The fall in death rate was greatest among Moslems, where the rate fell from 24.86 per thousand in 1937 to 18.71 per thousand in 1938. The Jewish death rate rose from 7.72 to 8.11 per thousand, and the Christian death rate fell from 13.95 to 12.51 per thousand. The fall in the Moslem rate, and as a consequence in the rate for "All Religions", is believed to be due in part to the interruption of regular registration owing to the disturbed conditions in the villages.

The crude death rate for the population as a whole has shown a marked decline in the last few years. This is due in part without doubt to the remarkably low Jewish rate, which is explained by the larger proportion of Jewish immigrants in the most vital period of life.

The infant mortality rate also reached a low record, being 112.05 per 1,000 live births. The lowest rate recorded previously was 121.58 per thousand in 1936. The fall from the high figure of 152.84 in 1937 is particularly notable. Among Jews the infant mortality rate, 58.51 per thousand live births, though still the lowest of all communities, was slightly above the rate for 1937, 57.20 per thousand. Among other communities the fall was very considerable.

The stated ages of all deaths registered in 1938 are shown in the following table. The stated ages, particularly of villagers, must of necessity be very unreliable as many of the older generation of villagers have no conception of precise age and could not declare the date of their birth. The most interesting feature of the table is the large number of deaths among Moslems in the second, third and fourth years of life.

DEATHS, BY AGE, SEX AND RELIGION, 1938.

Age	Males					Females				
	Total	Mos.	Jews	Chr.	Oth.	Total	Mos.	Jews	Chr.	Oth.
All Ages	10,793	8,166	1,820	688	119	9,520	7,295	1,442	704	79
Under 1 month	914	695	158	50	11	806	619	117	62	8
1- 2 months	531	471	36	19	5	514	455	28	28	3
3- 5 " (incl.)	625	533	44	45	3	615	511	51	50	3
6-11 " "	1,070	897	103	62	8	968	802	81	81	4
Total under 1 year	3,140	2,596	341	176	27	2,903	2,387	277	221	18
1 Year	1,345	1,219	67	40	19	1,342	1,221	55	53	13
2 Years	755	673	38	30	14	847	787	32	22	6
3 "	283	259	14	6	4	290	264	12	12	2
4 "	153	132	13	5	3	142	131	5	4	2
5- 9 years (incl.)	350	294	32	21	3	262	224	19	14	5
10-14 "	225	191	15	16	3	162	134	14	13	1
15-19 "	198	140	41	11	6	102	73	18	10	1
20-24 "	292	184	78	28	2	148	105	31	9	3
25-29 "	410	263	100	42	5	236	149	69	16	2
30-34 "	349	229	79	36	5	248	174	58	16	—
35-39 "	353	247	85	14	7	221	155	46	17	3
40-44 "	263	179	60	22	2	191	144	28	13	6
45-49 "	236	162	49	23	2	171	116	32	22	1
50-54 "	261	174	65	21	1	190	123	48	19	—
55-59 "	231	127	76	28	—	162	59	89	13	1
60-64 "	374	214	130	27	3	292	143	118	31	—
65-69 "	295	146	127	20	2	229	101	103	25	—
70-74 "	373	188	148	36	1	326	165	111	46	4
75-79 "	264	103	134	26	1	238	93	112	33	—
80-84 "	238	144	65	28	1	321	194	79	42	6
85-89 "	165	108	35	21	1	168	88	53	26	1
90-94 "	92	73	15	4	—	162	124	24	10	4
95-99 "	66	55	5	5	1	68	52	4	12	—
100 and over	61	53	7	1	—	92	84	3	5	—
Not stated	21	13	1	1	6	7	5	2	—	—

The regional distribution of births and deaths is shown in the four following tables. The first table gives the total number of births, deaths and infant deaths alloted to each town, or rural area, and the corresponding rates. The second, third and fourth tables give the details by sex and religion in the same areas for births, deaths, and infant deaths, respectively.

The rates shown in the first table do not possess a high degree of accuracy because the population estimates are only approximate. The birth rate for all village areas was higher than that for all towns, the rates being 43.2 per thousand and 36.1 per thousand respectively. The highest birth rates, per thousand of population, were recorded in Gaza (71.4) and Hebron (62.7), the lowest in Beisan villages (20.5), Jericho and villages (23.2) — although both these rates are believed to be too low — and in Rehovoth (23.4) and Hedera (24.9). The highest death rates, per thousand of population, were recorded in Gaza (30.1), Hebron (29.8), Khan Yunis (27.1) and Beisan (26.8); the lowest in Nathanya (3.2), Hedera (4.9) and Petah Tiqva (7.8).

The infant mortality rate, per 1,000 live births, was highest in Bethlehem (303), Beisan (200), Jericho and villages (200), Majdal (188) and Hebron (179). It was lowest in Hedera (18), Nathanya (24), Affula (26) and Rishon-le-Zion (55).

Classification of causes of Deaths.

37. The causes of death of residents of towns of Palestine in 1938 are shown in the table on pages 36 and 37. The figures in this table are not comparable with those on page 23, or with those of previous years, firstly because this list includes an additional eleven small towns, and secondly because the figures for earlier years include deaths of many villagers who died in hospitals in the towns.

The causes are tabled according to the Abridged International List of the Causes of Deaths.

Out of a total of 8,233 deaths of residents of towns the cause was sufficiently well specified to enable it to be classified according to the International List in all but 756 cases. Among the 7,477 deaths so classified the ten principal causes were as follows :—

Cause	No. of Deaths	Proportion of total (per cent)
1. Diarrhoea and Enteritis	1,420	19.0
2. Pneumonia	1,313	17.5
3. Diseases of the Heart	621	8.3
4. Congenital debility and malformations, premature birth, etc.	559	7.5
5. Homicide	473	6.3
6. Cerebral haemorrhage, embolism or thrombosis	338	4.5
7. Cancer and other malignant tumours	322	4.3
8. Senility	283	3.8
9. Nephritis	242	3.3
10. Accidental and violent deaths (suicide and homicide excepted).	188	2.5

BIRTHS, DEATHS AND INFANT DEATHS, BY PLACE OF RESIDENCE, AND CORRESPONDING RATES, 1938.

Place of Residence	Mean Settled Population	Births	Deaths	Infant* Deaths	Birth† Rate	Death† Rate	Infant‡ Mortality Rate
TOTAL	1,351,600	53,930	20,313	6,043	39.9	15.0	112
SOUTHERN DISTRICT.							
Gaza	19,400	1,385	583	199	71.4	30.1	144
Khan Yunis	4,500	277	122	36	61.6	27.1	130
Majdal	7,400	442	192	83	59.7	25.9	188
Gaza Villages	72,400	3,566	1,426	446	49.3	19.7	125
Beersheba	3,400	193	77	25	56.8	22.6	130
Beersheba Villages	—	—	76	2	—	—	—
Jaffa	76,400	2,799	1,059	357	36.6	13.9	128
Tel Aviv	125,500	3,261	1,015	192	26.0	8.1	59
Petah Tiqva	15,400	388	120	29	25.2	7.8	75
Jaffa Villages	73,500	2,215	713	155	30.1	9.7	70
Ramle	12,100	591	236	88	48.8	19.5	149
Lydda	14,000	717	150	49	51.2	10.7	68
Rishon-le-Zion	5,600	163	45	9	29.1	8.0	55
Rehovoth	7,000	164	66	16	23.4	9.4	98
Ramle Villages	58,300	2,869	1,038	283	49.2	17.8	99
JERUSALEM DISTRICT.							
Hebron	18,800	1,179	561	211	62.7	29.8	179
Hebron Villages	55,500	2,132	921	218	38.4	16.6	102
Bethlehem	7,300	290	169	88	39.7	23.2	303
Beit-Jala	3,100	143	58	20	46.1	18.7	140
Bethlehem Villages	8,400	389	176	55	46.3	21.0	141
Jerusalem	127,600	3,873	1,468	355	30.4	11.5	92
Jerusalem Villages	47,100	2,523	1,017	331	53.6	21.6	131
Jericho & Villages	4,100	95	41	19	23.2	10.2	200
Ramallah	5,000	197	69	23	39.4	13.8	117
Ramallah Villages	38,100	1,578	790	277	41.4	20.7	176
HAIFA-SAMARIA DISTRICT							
Tulkarm	5,900	323	83	25	54.7	14.1	77
Nathanya	3,100	84	10	2	27.1	3.2	24
Tulkarm Villages	55,600	2,721	999	364	48.9	18.0	134
Nablus	19,700	960	319	94	48.7	16.2	98
Nablus Villages	59,600	2,492	1,055	329	41.8	17.7	132
Jenin	3,200	161	62	20	50.3	19.4	124
Jenin Villages	46,700	2,297	869	303	49.2	18.6	132
Haifa	101,600	3,372	1,013	268	33.2	10.0	79
Shafa 'Amr	3,300	113	41	9	34.2	12.4	80
Hadera	4,500	112	22	2	24.9	4.9	18
Haifa Villages	56,900	2,310	698	191	40.6	12.3	83
GALILEE-ACRE DISTRICT							
Nazareth	10,000	416	136	46	41.6	13.6	111
Affula	1,400	38	13	1	27.1	9.3	26
Nazareth Villages	23,600	999	357	146	42.3	15.1	146
Beisan	3,400	170	91	34	50.0	26.8	200
Beisan Villages	14,800	303	135	33	20.5	9.1	109
Tiberias	9,900	354	125	26	35.8	12.6	73
Tiberias Villages	21,400	872	339	96	40.7	15.8	110
Acre	8,800	442	161	47	50.2	18.3	106
Acre Villages	44,700	1,805	629	161	40.4	14.1	89
Safad	9,800	414	167	41	42.2	17.0	99
Safad Villages	33,800	1,712	687	232	50.7	20.3	136
Outside of Palestine	—	13	44	4	—	—	—
Not stated	—	18	70	3	—	—	—
SUMMARY:—							
Towns	637,100	23,021	8,233	2,395	36.1	12.9	104
Villages	714,500	30,878	11,966	3,641	43.2	16.7	118
Not stated and abroad	—	31	114	7	—	—	—

* aged under 1 year. † per 1,000 of population. ‡ per 1,000 live births.

BIRTHS BY PLACE OF RESIDENCE — CALENDAR YEAR 1938.

	MALES					FEMALES				
	Total	Mos.	Jew.	Chr.	Oth.	Total	Mos.	Jew.	Chr.	Oth.
TOTAL	27,974	20,381	5,417	1,926	250	25,956	18,669	5,146	1,892	249
SOUTHERN DISTRICT.										
Gaza	741	730	—	11	—	644	623	—	21	—
Khan Yunis	155	155	—	—	—	122	122	—	—	—
Majdal	234	233	—	1	—	208	205	—	3	—
Gaza Villages	1,840	1,824	16	—	—	1,726	1,718	8	—	—
Beersheba	98	93	—	5	—	95	89	—	6	—
Beersheba Villages	—	—	—	—	—	—	—	—	—	—
Jaffa	1,490	1,084	155	249	2	1,309	952	145	209	3
Tel Aviv	1,676	—	1,676	—	—	1,585	—	1583	1	1
Petah Tiqva	209	—	209	—	—	179	—	179	—	—
Jaffa Villages	1,184	658	518	8	—	1,031	581	444	6	—
Ramle	290	240	—	50	—	301	246	2	53	—
Lydda	375	346	—	29	—	342	308	—	34	—
Rishon-le-Zion	75	—	75	—	—	88	—	88	—	—
Rehovoth	81	—	80	1	—	83	—	83	—	—
Ramle Villages	1,519	1,391	127	1	—	1,350	1,238	110	2	—
JERUSALEM DISTRICT.										
Hebron	646	644	—	2	—	533	531	—	2	—
Hebron Villages	1,077	1,075	—	1	1	1,055	1,054	—	1	—
Bethlehem	144	44	—	100	—	146	52	—	93	1
Beit-Jala	64	3	—	61	—	79	2	—	77	—
Bethlehem Villages	189	133	—	56	—	200	150	—	50	—
Jerusalem	2,003	518	1,155	330	—	1,870	442	1,102	326	—
Jerusalem Villages	1,291	1,274	13	4	—	1,232	1,216	11	5	—
Jericho & Villages	50	45	—	5	—	45	41	—	4	—
Ramallah	114	13	—	101	—	83	12	—	71	—
Ramallah Villages	790	725	—	65	—	788	709	—	79	—
HAIFA-SAMARIA DISTRICT										
Tulkarm	164	159	—	4	1	159	153	—	6	—
Nathanya	50	—	50	—	—	34	—	34	—	—
Tulkarm Villages	1,433	1,345	88	—	—	1,288	1,205	83	—	—
Nablus	502	490	—	8	4	458	446	—	9	3
Nablus Villages	1,310	1,294	—	16	—	1,182	1,171	—	11	—
Jenin	82	82	—	—	—	79	77	—	2	—
Jenin Villages	1,176	1,156	1	19	—	1,121	1,102	—	17	2
Haifa	1,717	785	567	362	3	1,655	699	581	371	4
Shafa 'Amr	69	37	—	16	16	44	20	—	10	14
Hadera	65	—	65	—	—	47	—	47	—	—
Haifa Villages	1,204	823	298	16	67	1,106	733	299	19	55
GALILEE-ACRE DISTRICT										
Nazareth	214	97	—	117	—	202	78	—	124	—
Affula	15	—	15	—	—	23	—	23	—	—
Nazareth Villages	506	418	31	57	—	493	409	42	42	—
Beisan	97	89	—	8	—	73	68	—	5	—
Beisan Villages	162	96	61	5	—	141	83	54	4	—
Tiberias	166	76	82	8	—	188	81	97	10	—
Tiberias Villages	460	358	74	21	7	412	322	63	21	6
Acre	221	185	—	34	2	221	191	—	28	2
Acre Villages	927	656	12	129	130	878	606	10	129	133
Safad	205	181	21	3	—	209	174	30	5	—
Safad Villages	883	822	25	19	17	829	754	25	31	19
Outside of Palestine	7	4	—	3	—	6	2	1	3	—
Not stated	4	—	3	1	—	14	4	2	2	6
SUMMARY: —										
Towns	11,962	6,284	4,150	1,500	28	11,059	5,571	3,994	1,466	28
Villages	16,001	14,093	1,264	422	222	14,877	13,092	1,149	421	215
Not stated and abroad	11	4	3	4	—	20	6	3	5	6

DEATHS BY PLACE OF RESIDENCE — CALENDAR YEAR 1938.

	MALES					FEMALES				
	Total	Mos.	Jew.	Chr.	Oth.	Total	Mos.	Jew.	Chr.	Oth.
TOTAL	10,793	8,166	1,820	688	119	9,520	7,295	1,442	704	79
SOUTHERN DISTRICT.										
Gaza	295	293	—	2	—	288	284	—	4	—
Khan Yunis	73	73	—	—	—	49	49	—	—	—
Majdal	110	110	—	—	—	82	82	—	—	—
Gaza Villages	735	732	3	—	—	691	688	2	—	1
Beersheba	35	34	—	1	—	42	40	—	2	—
Beersheba Villages	51	51	—	—	—	25	25	—	—	—
Jaffa	598	465	60	71	2	461	341	47	73	—
Tel Aviv	552	—	551	1	—	463	—	463	—	—
Petah Tiqva	69	—	69	—	—	51	—	51	—	—
Jaffa Villages	397	268	127	2	—	316	215	94	7	—
Ramle	127	104	—	23	—	109	97	—	12	—
Lydda	63	59	—	4	—	87	83	—	4	—
Rishon-le-Zion	27	—	27	—	—	18	1	17	—	—
Rehovoth	34	—	34	—	—	32	—	32	—	—
Ramle Villages	521	493	27	1	—	517	489	28	—	—
JERUSALEM DISTRICT.										
Hebron	282	282	—	—	—	279	277	1	1	—
Hebron Villages	460	459	—	1	—	461	461	—	—	—
Bethlehem	74	19	2	53	—	95	19	1	75	—
Beit-Jala	29	1	—	28	—	29	2	—	27	—
Bethlehem Villages	83	65	—	18	—	93	76	—	17	—
Jerusalem	787	197	465	125	—	681	146	397	138	—
Jerusalem Villages	516	505	6	5	—	501	496	3	2	—
Jericho & Villages	31	27	1	3	—	10	9	—	1	—
Ramallah	36	4	—	32	—	33	6	—	27	—
Ramallah Villages	398	370	—	28	—	392	364	—	28	—
HAIFA-SAMARIA DISTRICT										
Tulkarm	48	46	—	2	—	35	35	—	—	—
Nathanya	7	—	7	—	—	3	—	3	—	—
Tulkarm Villages	538	509	29	—	—	461	449	12	—	—
Nablus	167	165	—	2	—	152	145	—	4	3
Nablus Villages	529	526	—	3	—	526	523	—	3	—
Jenin	36	33	—	3	—	26	25	—	—	1
Jenin Villages	449	445	—	4	—	420	410	—	10	—
Haifa	563	271	193	98	1	450	183	154	109	4
Shafa 'Amr	24	9	—	3	12	17	4	—	8	5
Hadera	12	1	10	1	—	10	—	10	—	—
Haifa Villages	410	287	96	10	17	288	215	49	7	17
GALILEE-ACRE DISTRICT										
Nazareth	66	36	—	30	—	70	30	—	40	—
Affula	9	—	8	1	—	4	—	4	—	—
Nazareth Villages	205	170	10	25	—	152	133	6	13	—
Beisan	52	46	—	6	—	39	38	—	1	—
Beisan Villages	75	64	11	—	—	60	56	4	—	—
Tiberias	67	26	35	6	—	58	27	27	4	—
Tiberias Villages	172	152	11	6	3	167	143	13	7	4
Acre	92	75	1	14	2	69	51	—	17	1
Acre Villages	360	239	8	55	58	269	182	3	48	36
Safad	84	68	13	3	—	83	65	15	3	—
Safad Villages	355	331	10	9	5	332	313	2	10	7
Outside of Palestine	26	18	2	6	—	18	13	4	1	—
Not stated	64	38	4	3	19	6	5	—	1	—
SUMMARY: —										
Towns	4,418	2,417	1,475	509	17	3,815	2,030	1,222	549	14
Villages	6,285	5,693	339	170	83	5,681	5,247	216	153	65
Not stated and abroad	90	56	6	9	19	24	18	4	2	—

INFANT DEATHS BY PLACE OF RESIDENCE — CALENDAR YEAR 1938.

	MALES					FEMALES				
	Total	Mos.	Jew.	Chr.	Oth.	Total	Mos.	Jew.	Chr.	Oth.
TOTAL	3,140	2,596	341	176	27	2,903	2,387	277	221	18
SOUTHERN DISTRICT.										
Gaza	108	108	—	—	—	91	91	—	—	—
Khan Yunis	22	22	—	—	—	14	14	—	—	—
Majdal	54	54	—	—	—	29	29	—	—	—
Gaza Villages	243	243	—	—	—	203	202	1	—	—
Beersheba	9	9	—	—	—	16	15	—	1	—
Beersheba Villages	2	2	—	—	—	—	—	—	—	—
Jaffa	189	159	12	18	—	168	129	16	23	—
Tel Aviv	114	—	114	—	—	78	—	78	—	—
Petah Tiqva	17	—	17	—	—	12	—	12	—	—
Jaffa Villages	88	65	23	—	—	67	56	9	2	—
Ramle	45	40	—	5	—	43	39	—	4	—
Lydda	20	18	—	2	—	29	28	—	1	—
Rishon-le-Zion	5	—	5	—	—	4	—	4	—	—
Rehovoth	7	—	7	—	—	9	—	9	—	—
Ramle Villages	149	141	8	—	—	134	125	9	—	—
JERUSALEM DISTRICT.										
Hebron	112	112	—	—	—	99	98	—	1	—
Hebron Villages	109	109	—	—	—	109	109	—	—	—
Bethlehem	39	14	1	24	—	49	15	1	33	—
Beit-Jala	8	1	—	7	—	12	1	—	11	—
Bethlehem Villages	21	15	—	6	—	34	29	—	5	—
Jerusalem	174	48	100	26	—	181	53	94	34	—
Jerusalem Villages	179	177	1	1	—	152	152	—	—	—
Jericho & Villages	12	12	—	—	—	7	7	—	—	—
Ramallah	11	—	—	11	—	12	2	—	10	—
Ramallah Villages	141	131	—	10	—	136	125	—	11	—
HAIFA-SAMARIA DISTRICT										
Tulkarm	10	10	—	—	—	15	15	—	—	—
Nathanya	2	—	2	—	—	—	—	—	—	—
Tulkarm Villages	192	190	2	—	—	172	169	3	—	—
Nablus	45	45	—	—	—	49	47	—	1	1
Nablus Villages	160	159	—	1	—	169	168	—	1	—
Jenin	11	11	—	—	—	9	9	—	—	—
Jenin Villages	149	148	—	1	—	154	149	—	5	—
Haifa	136	86	28	21	1	132	78	23	29	2
Shafa 'Amr	7	3	—	—	4	2	1	—	—	1
Hadera	2	—	2	—	—	—	—	—	—	—
Haifa Villages	109	94	10	—	5	82	68	10	1	3
GALILEE-ACRE DISTRICT										
Nazareth	17	11	—	6	—	29	12	—	17	—
Affula	—	—	—	—	—	1	—	1	—	—
Nazareth Villages	81	70	—	11	—	65	57	2	6	—
Beisan	16	15	—	1	—	18	18	—	—	—
Beisan Villages	12	10	2	—	—	21	20	1	—	—
Tiberias	14	9	4	1	—	12	10	2	—	—
Tiberias Villages	53	47	2	3	1	43	39	1	2	1
Acre	20	16	—	4	—	27	24	—	2	1
Acre Villages	89	60	—	15	14	72	49	1	15	7
Safad	16	16	—	—	—	25	24	—	1	—
Safad Villages	117	116	—	—	1	115	109	—	4	2
Outside of Palestine	2	—	—	2	—	2	2	—	—	—
Not stated	2	—	1	—	1	1	—	—	1	—
SUMMARY:—										
Towns	1230	807	292	126	5	1165	752	240	168	5
Villages	1,906	1,789	48	48	21	1,735	1,633	37	52	13
Not stated and abroad	4	—	1	2	1	3	2	—	1	—

DEATHS OF RESIDENTS OF 29 MAIN TOWNS, 1938, CLASSIFIED ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF THE CAUSES OF DEATH.

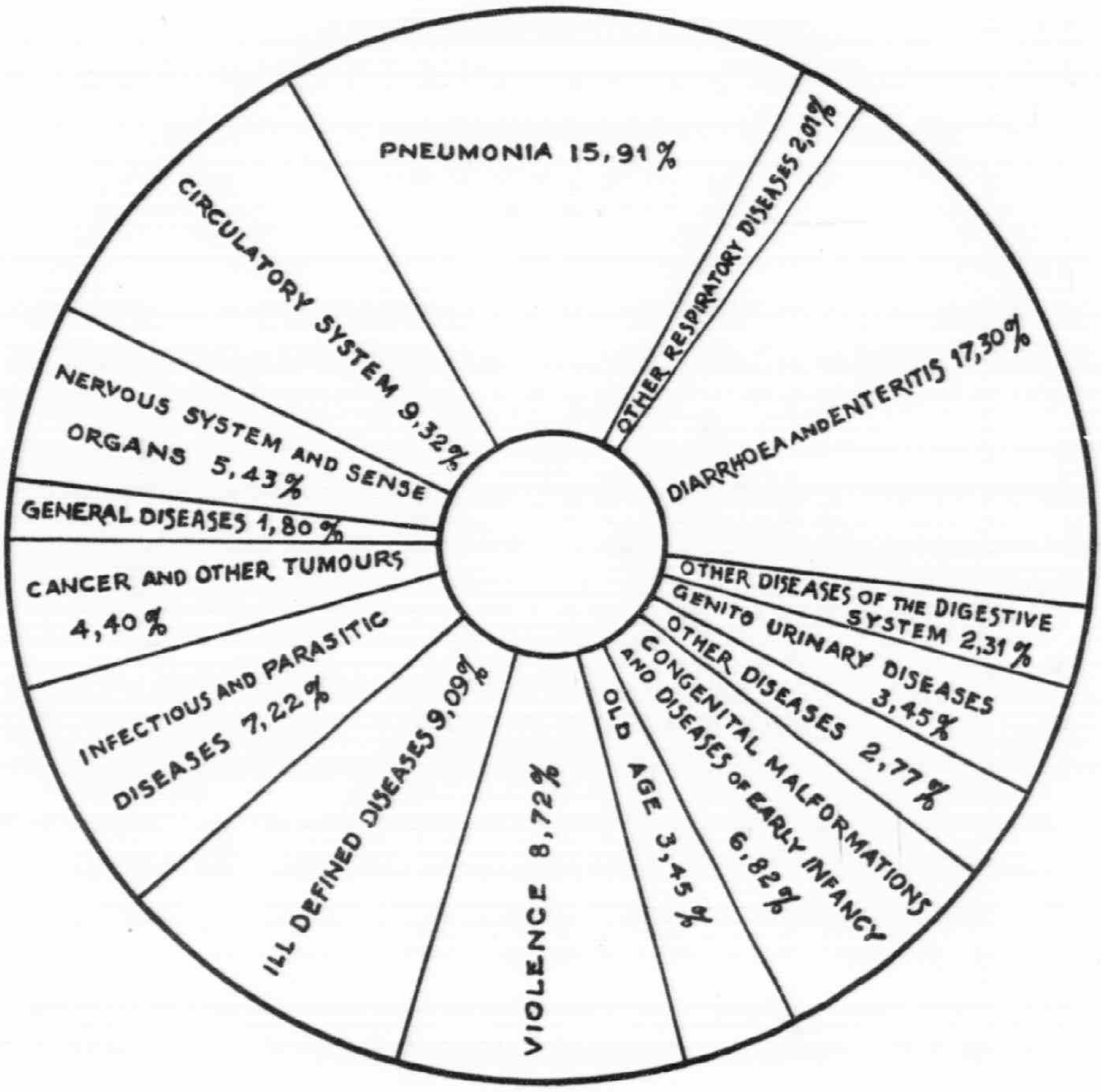
Cause of Death (Abridged International List)	Deaths of Residents of Towns in 1938																
	All Towns			Jerusalem		Jaffa		Tel-Aviv		Haifa		Gaza		Hebron		23 Other Towns	
	Total	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
TOTAL	8,233	4,418	3,815	787	681	598	461	552	463	563	450	295	288	282	279	1,341	1,193
1. Typhoid & para-typhoid fevers	94	51	43	9	8	5	7	1	1	8	10	7	3	2	1	19	13
2. Exanthematic typhus	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3. Smallpox	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4. Measles	91	42	49	9	7	1	2	—	1	3	—	1	5	26	31	2	3
5. Scarlet Fever	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	1
6. Whooping Cough	11	5	6	—	3	—	—	—	—	2	1	1	1	—	—	2	1
7. Diphtheria	17	14	3	3	1	2	—	5	—	3	—	—	1	—	—	1	1
8. Influenza	10	7	3	2	—	—	—	2	2	1	—	1	—	—	—	1	1
9. Plague	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10. Tuberculosis of the respiratory system	153	87	66	15	10	19	13	18	16	12	7	2	2	1	1	20	17
11. Other forms of tuberculosis	40	27	13	4	4	7	2	3	2	4	2	—	—	—	1	9	2
12. Syphilis	15	10	5	1	—	—	—	—	—	3	1	1	—	—	—	5	4
13. Malaria	10	5	5	—	—	—	—	—	—	2	2	—	—	1	—	2	3
14. Other infectious & parasitic diseases	151	90	61	15	7	12	8	16	22	11	7	2	2	1	—	33	15
15. Cancer & other malignant tumours	322	145	177	44	53	5	19	29	42	30	32	4	4	—	—	33	27
16. Tumours, non-malignant, or of which the nature is not specified	39	24	15	5	3	—	—	7	6	4	5	3	—	3	—	2	1
17. Chronic rheumatism and gout	6	5	1	2	—	—	—	—	—	—	—	—	1	1	—	2	—
18. Diabetic mellitus	45	15	30	3	10	1	2	3	6	1	6	—	—	1	—	6	6
19. Alcoholism (acute or chronic).	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
20. Other general diseases & chronic poisonings	97	46	51	5	8	14	17	5	6	5	6	3	2	1	—	13	12
21. Progressive locomotor ataxia and general paralysis of the insane	1	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—
22. Cerebral haemorrhage, cerebral embolism and thrombosis	338	157	181	62	58	13	17	30	38	25	19	6	6	1	3	20	40

DEATHS OF RESIDENTS OF 29 MAIN TOWNS, 1938, CLASIFIED ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF THE CAUSES OF DEATH *(Continued)*.

Cause of Death (Abridged International List)	Deaths of Residents of Towns in 1938																
	All Towns			Jerusalem		Jaffa		Tel-Aviv		Haifa		Gaza		Hebron		23 Other Towns	
	Total	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
23. Other diseases of the nervous system and of the organs of special sense	109	69	40	24	15	2	3	13	4	8	10	3	2	3	—	16	6
24. Diseases of the heart	621	339	282	80	69	30	25	97	69	39	44	18	17	2	3	73	55
25. Other diseases of the circulatory system	148	77	71	20	12	5	1	16	24	4	5	2	2	—	1	30	26
26. Bronchitis	145	56	89	3	4	6	5	1	—	1	3	14	17	15	27	16	33
27. Pneumonia	1,313	718	595	95	91	128	88	78	58	97	79	65	55	32	22	223	202
28. Other diseases of the respiratory system (tuberculosis excepted).	166	93	73	24	17	8	5	25	24	10	9	1	2	2	1	23	15
29. Diarrhoea and enteritis	1,420	676	744	91	105	114	102	17	21	58	77	74	100	89	87	233	252
30. Appendicitis	15	11	4	1	—	1	2	3	—	—	1	1	—	—	—	5	1
31. Diseases of the liver and biliary passages	65	34	31	7	7	3	2	3	7	8	6	2	1	—	—	11	8
32. Other diseases of the digestive system	112	67	45	15	12	1	4	23	8	3	7	6	5	3	1	16	8
33. Nephritis	242	129	113	29	26	17	16	27	11	17	13	10	15	—	2	29	30
34. Other diseases of the genito-urinary system	40	28	12	11	4	—	2	3	—	7	1	1	—	—	—	6	5
35. Puerperal septicaemia	10	—	10	—	4	—	2	—	—	—	1	—	—	—	—	—	3
36. Other diseases of pregnancy, childbirth and the puerperal state	27	—	27	—	5	—	5	—	2	—	5	—	1	—	1	—	8
37. Diseases of the skin & cellular tissue & the bones & organs of locomotion	48	24	24	8	5	1	—	5	6	4	2	2	2	2	1	2	8
38. Congenital debility & malformations, premature birth & other diseases of early infancy	559	272	287	54	55	21	30	39	28	34	38	17	11	27	34	80	91
39. Senility	283	107	176	28	36	9	4	9	9	3	10	4	11	17	34	37	72
40. Suicide	52	28	24	2	6	4	1	6	8	6	6	1	—	—	—	9	3
41. Homicide	473	430	43	75	9	76	5	25	1	99	10	13	—	21	1	121	17
42. Violent or accidental deaths (suicide and homicide excepted)	188	141	47	22	12	17	2	18	7	39	11	5	2	3	3	37	10
43. Causes of death not specified or ill-defined	756	388	368	18	15	76	70	25	34	12	14	25	18	28	24	204	193

PROPORTION OF DEATHS FROM EPIDEMIC, ENDEMIC, SYSTEMATIC AND OTHER DISEASES SHOWN AS PERCENTAGE OF TOTAL DEATHS OF RESIDENTS IN 29 TOWNS OF PALESTINE IN 1938.

TOTAL DEATHS — 8,233.

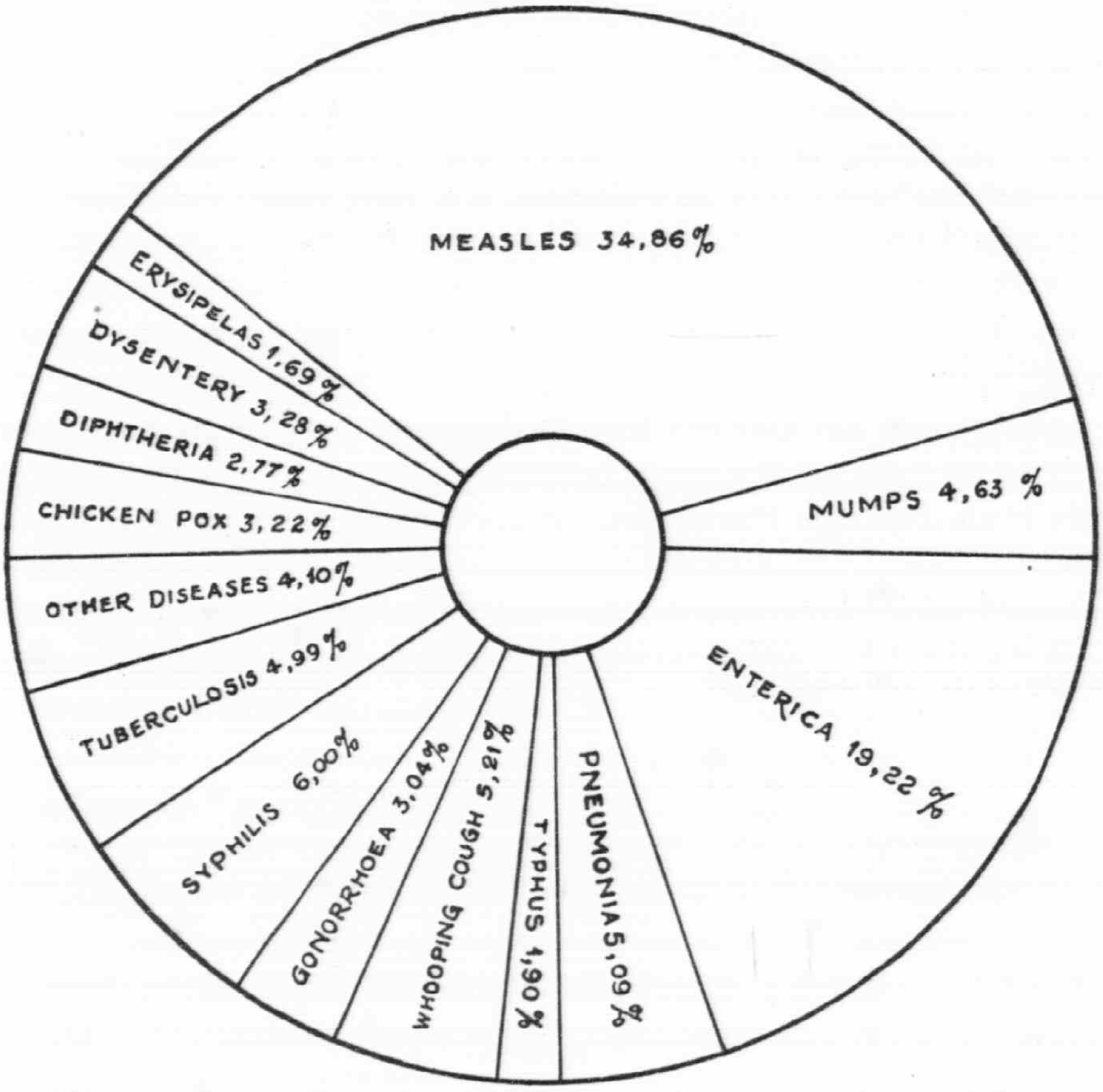


Communicable disease accounted for 1066 deaths in the country as a whole, of which 36.40% were due to pneumonia, 20.73% due to tuberculosis, 16.42% to measles and 14.63% to enteric fever.

The following two graphs give the proportions in percentages of cases and deaths of epidemic, endemic and infectious disease (excluding malaria) notified during 1938 :—

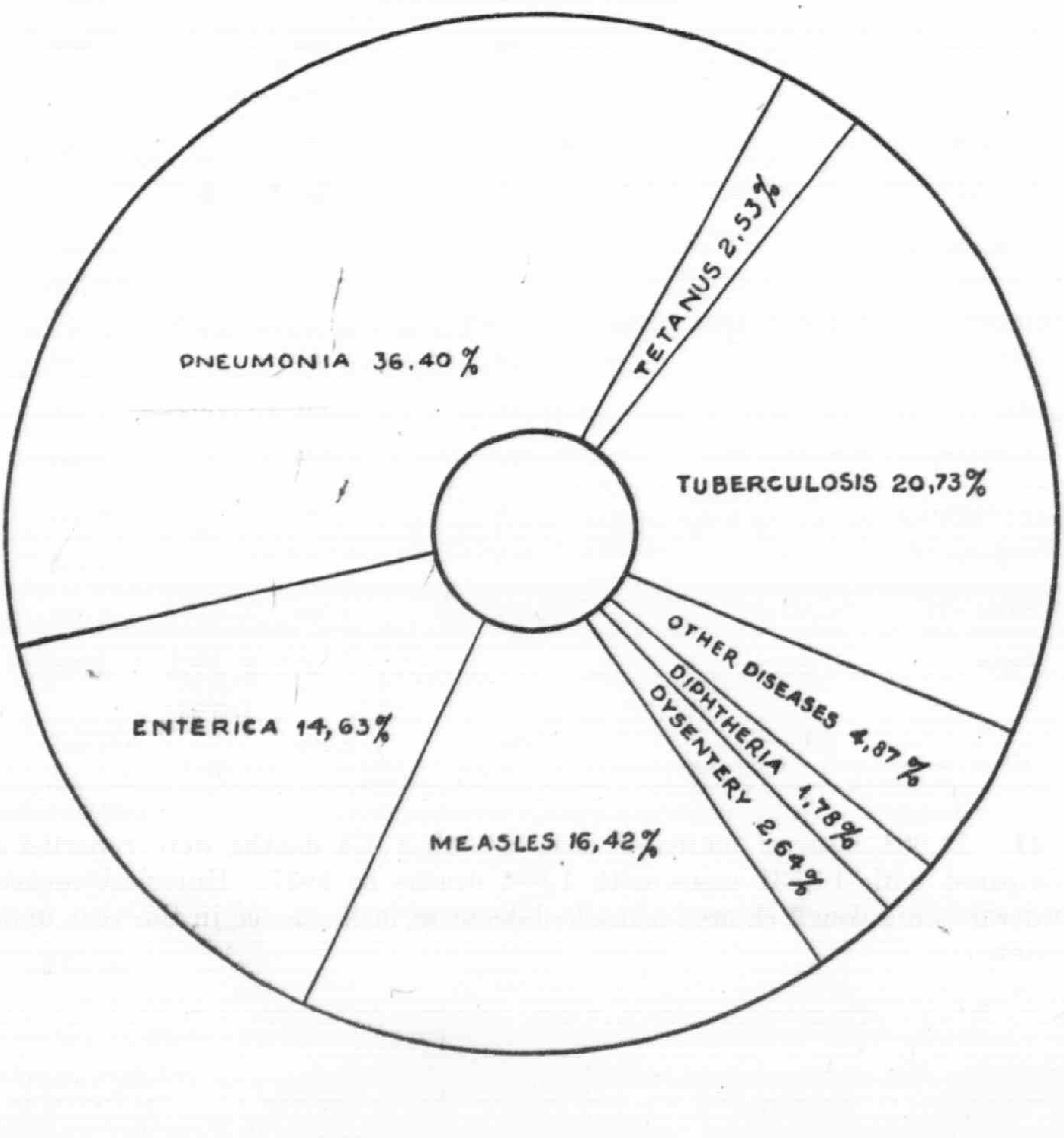
PROPORTION IN PERCENTAGE OF CASES OF EPIDEMIC, ENDEMIC AND INFECTIOUS DISEASES (MALARIA EXCEPTED) NOTIFIED IN PALESTINE IN 1938.

TOTAL INCIDENCE — 9,235.



PROPORTION IN PERCENTAGE OF DEATHS FROM EPIDEMIC, ENDEMIC AND INFECTIOUS DISEASES (MALARIA EXCEPTED) NOTIFIED IN PALESTINE IN 1938.

TOTAL DEATHS — 1,066.



EPIDEMIC SERVICE.

Mobile Equipment.

38. One temporary epidemic unit was established during the year.

An outbreak of typhus occurred in the Jaffa district amongst certain Jewish immigrants and this establishment limited effectively the outbreak to the persons already afflicted.

Training of Junior Personnel.

39. The course of instruction in hygiene, sanitation, and departmental procedure was attended by 32 candidates, 9 of these passed the examinations at the end of the course and were issued with certificates.

Disinfection.

40. The 28 mobile and 10 fixed steam disinfecting machines functioned regularly throughout the year.

The 3 sulphur gas machines (two fixed and one portable) were also maintained.

In Haifa Port the Clayton sulphur gas disinfecting barge and portable Clayton machine were available throughout the year for disinfection and rat destruction in vessels.

During the year 3,575 premises were disinfected, the classification being shown on the following table :—

DISINFECTION SERVICE, 1938.

Location	Method "A"	Method "B"	Articles or Bundles
Jerusalem	5	399	2,646
Ramallah	—	38	494
Bethlehem	—	76	434
Hebron	—	107	1,243
Beersheba	—	16	3,272
Jaffa	43	415	2,610
Tel Aviv	42	330	980
Ramleh	5	54	1,971
Gaza	11	388	2,330
Majdal	17	51	1,360
Jaffa Quarantine	—	—	13,247
Haifa	32	777	78,111
Acre	82	69	283
Nazareth	34	78	4,016
Nablus	14	178	7,885
Tulkarm	8	100	40,045
Tiberias	70	37	2,425
Safad	12	60	6,963
Jenin	—	27	4,590
TOTAL	375	3,200	174,905

Inectious and Communicable Diseases.

41. 11,084 cases of notifiable disease with 1,074 deaths were reported as compared with 14,531 cases with 1,684 deaths in 1937. Enterica, measles and whooping cough showed a marked decrease in incidence in the year under review.

(a) *Acute Poliomyelitis* :—

19 cases were reported with one death as compared with 18 cases with 4 deaths in 1937. The majority of the cases occurred in the towns of Jaffa and Tel Aviv in the last month of the year.

(b) *Cerebro-Spinal Meningitis.*

There was a marked decrease in this disease in 1938. Fourteen cases only were reported with one death as compared with 44 cases with 23 deaths in 1937.

(c) *Anthrax.*

20 cases were reported during the year with no deaths. Practically all cases occurring in the Jaffa and Nablus areas.

(d) *Diphtheria.*

In 1938, 256 cases were recorded with 19 deaths, a marked decrease from the previous year, when 373 cases with 32 deaths occurred.

(e) *Pneumonia.*

Although recognised that notification of this disease is incomplete, both the incidence and the death rate were high, and in proportion to the previous year. 470 cases were notified during the year with 388 deaths as compared with 512 cases with 390 deaths in 1937.

(f) *Measles.*

The number of cases reported in 1938 fell to one half of those reported in the previous year, i.e. 3,219 cases in 1938 as against 7,594 cases in 1937. The death rate however, was less than one third of the previous year, i.e. 175 deaths as compared with 669 deaths in 1937. Early in the year extensive whole blood prophylaxis was carried out in the 3 districts amongst the population of the affected areas and there is no doubt that this factor contributed to this satisfactory result.

(g) *Scarlet Fever.*

67 cases occurred with one mortality. The disease was of a mild type.

(h) *Smallpox.*

No cases were reported.

(i) *Leishmaniasis.* (Kala Azar).

8 cases of this disease with one death occurred.

(j) *Typhoid.*

There were 1,643 cases of typhoid fever reported with 155 deaths in 1938 as compared with 2,049 cases with 194 deaths in 1937.

The incidence of the disease was high throughout the year, but attained its maximum in the months of July and August. The greatest concentration appeared, as in the previous year, in the Nablus district, due to the same cause, i.e. delayed notification of suspicious fevers consequent on the disturbed conditions in the region.

There was a gradual fall in the number of cases reported in the last 4 months of the year in all districts.

(k) *Paratyphoid.*

There were 132 cases with 1 death as compared with 201 cases with 7 deaths in 1937.

(l) *Dysentery.*

303 cases were notified with 28 deaths. Notification of this disease however is unreliable.

(*m*) *Puerperal Fever.*

22 cases with 6 deaths occurred as compared with 45 cases with 24 deaths in the previous year.

(*n*) *Typhus.*

176 cases of the murine type only, were reported with 5 deaths.

(*o*) *Relapsing Fever.*

67 cases were notified in 1938 without mortality.

(*p*) *Blackwater fever.*

2 cases of this disease, both of whom died, were notified.

(*q*) *Hydrophobia.*

3 cases with 3 deaths occurred during the year.

(*r*) *Leprosy.*

7 cases were reported during the year.

Vaccination.

42. The subjoined table shows the results obtained from the protective vaccination against smallpox which was continued throughout the year.

VACCINATIONS, 1938.

Results of Vaccination	Towns	Villages	Persons entering Palestine			Totals
			Haifa Port	Jaffa Port	Tel-Aviv Port	
Primary Vaccinations						
Successful	14,155	25,849	—	—	—	40,004
Unsucccessful	317	795	—	—	—	1,112
Not observed	979	415	—	—	—	1,394
Re-vaccinations						
Successful	1,613	1,055	681	7	1,735	5,091
Unssuccessful	1,219	367	88	—	528	2,202
Not observed	465	83	4,955	—	116	5,619
Totals	18,748	28,564	5,724	7	2,379	55,422

CASE AND DEATH INCIDENCE OF

	Jerusalem Town		Jerusalem District		Ramallah and District		Bethlehem and District		Hebron and District		Beersheba and District		Jaffa Town		Jaffa District		Tel-Aviv		Ramleh and District	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Anthrax	—	—	—	—	—	—	—	—	—	—	—	—	6	—	—	—	1	—	—	—
Cerebro-Spinal Meningitis	3	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	1	—	—	—
Chicken Pox	1	—	1	—	11	—	2	—	7	—	2	—	29	—	23	—	27	—	36	—
Diphtheria	18	4	3	—	—	—	1	—	—	—	—	—	18	1	30	2	110	3	—	—
Dysentery	31	3	1	—	—	—	—	—	—	—	—	—	43	1	72	6	101	12	—	—
Erysipelas	13	—	—	—	—	—	3	2	4	—	2	—	22	2	8	—	38	—	—	—
German Measles	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	—	—	—	—	—
Hydrophobia	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—
Influenza	—	—	—	—	—	—	22	—	—	—	—	—	2	1	—	—	—	—	—	—
Measles	91	9	394	29	165	2	44	2	790	42	3	—	38	3	215	33	20	—	156	1
Mumps	6	—	14	—	4	—	—	—	7	—	4	—	12	—	5	—	2	—	38	—
Paratyphoid	31	—	1	—	—	—	—	—	—	—	—	—	13	—	14	—	28	—	—	—
Pneumonia	107	106	4	4	—	—	6	6	2	2	—	—	119	114	18	14	60	57	—	—
Poliomyelitis Acute	—	—	—	—	—	—	—	—	—	—	—	—	2	—	6	1	7	—	—	—
Puerperal Fever	6	1	—	—	—	—	—	—	—	—	—	—	5	2	—	—	—	—	—	—
Relapsing Fever	1	—	2	—	—	—	9	—	2	—	1	—	2	—	—	—	—	—	—	—
Scarlet Fever	6	—	—	—	—	—	—	—	—	—	—	—	3	—	21	—	22	—	—	—
Schistosomiasis	2	—	—	—	—	—	—	—	—	—	—	—	7	—	4	—	26	—	—	—
Typhoid	285	20	61	7	—	—	20	3	39	5	5	1	188	17	78	6	55	1	2	2
Typhus	—	—	—	—	—	—	—	—	—	—	—	—	9	—	49	—	46	—	—	—
Undulant Fever	5	—	—	—	—	—	2	—	—	—	—	—	3	—	3	—	2	—	—	—
Whooping Cough	2	—	5	—	8	—	—	—	—	—	3	—	9	—	7	—	8	—	2	—
Ankylostomiasis	—	—	—	—	—	—	—	—	—	—	—	—	3	—	7	—	7	—	—	—
Blackwater Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Gonorrhoea	37	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Leishmaniasis (Kala Azar)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	—	—	—
Leprosy	3	4	—	—	—	—	1	—	—	—	—	—	—	—	—	1	—	—	—	—
Malaria	25	—	73	—	1	—	115	1	75	—	117	—	67	—	142	1	53	1	1	—
Pellagra	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—
Rheumatic Fever	4	—	1	—	—	—	—	—	—	—	—	—	2	1	—	—	1	—	—	—
Syphilis	182	—	—	—	—	—	2	—	166	1	—	—	1	—	—	—	—	—	—	—
Tetanus	3	1	3	1	—	—	—	—	1	—	2	1	14	12	4	3	1	1	—	—
Tuberculosis	106	34	12	3	2	3	10	10	4	1	8	4	114	41	35	9	23	17	2	3
TOTAL	968	182	575	44	191	5	237	24	1,097	51	147	6	734	196	744	76	642	92	237	6

INFECTIOUS DISEASES BY LOCATIONS, 1938.

Gaza and District		Majdal and District		Haifa Town		Haifa District		Acre and District		Nazareth and District		Nablus and District		Tulkarm and District		Tiberias and District		Safad and District		Jenin and District		TOTALS	
Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
—	—	—	—	1	—	1	—	—	—	—	—	10	—	—	—	1	—	—	—	—	—	20	—
—	—	—	—	8	6	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14	6
7	—	41	—	14	—	16	—	5	—	5	1	6	—	39	—	5	—	19	—	1	—	297	1
2	2	—	—	36	4	33	1	—	—	2	1	2	1	—	—	1	—	—	—	—	—	256	19
—	—	—	—	28	1	7	—	—	—	—	—	10	5	—	—	9	—	1	—	—	—	303	28
5	1	—	—	11	3	5	—	2	—	5	—	32	2	—	—	4	1	2	—	—	—	156	11
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	—	—	3	3
—	—	—	—	—	—	—	—	21	—	—	—	—	—	—	—	—	—	1	—	—	—	46	1
192	—	94	8	19	2	288	11	38	—	5	—	147	10	418	21	11	—	86	2	5	—	3,219	175
28	—	15	—	22	1	1	—	3	—	3	—	81	—	176	—	—	—	7	—	—	—	428	1
6	—	—	—	14	1	4	—	—	—	—	—	14	—	—	—	1	—	6	—	—	—	132	1
15	3	—	—	56	45	2	1	—	—	10	5	27	17	2	—	18	6	23	8	1	—	470	388
—	—	—	—	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19	1
—	—	—	—	—	—	1	1	—	—	—	—	9	1	—	—	—	—	1	1	—	—	22	6
—	—	—	—	1	—	2	—	—	—	—	—	17	—	—	—	—	—	1	—	—	—	38	—
—	—	—	—	7	—	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	67	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	41	—
53	7	1	1	241	25	47	2	20	2	22	3	458	47	—	—	12	2	56	4	—	—	1,643	155
12	5	—	—	45	—	14	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	176	5
—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18	—
75	1	28	2	32	1	9	—	4	—	13	—	170	1	6	—	62	—	38	—	—	—	481	5
—	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19	—
—	—	—	—	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2
—	—	—	—	244	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	281	—
—	—	—	—	4	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8	1
1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	1	—	—	—	—	7	6
14	—	—	—	4	—	604	4	27	—	—	—	90	1	90	—	91	—	83	—	177	—	1,849	8
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8	1
—	—	—	—	89	—	—	—	58	—	—	—	24	—	3	—	25	1	—	—	4	—	554	2
3	2	—	—	8	5	—	—	—	—	—	—	3	1	—	—	—	—	—	—	—	—	42	27
3	2	1	5	64	30	1	3	24	1	1	1	40	17	6	6	1	2	3	26	1	3	461	221
416	23	180	16	958	127	1,046	23	202	3	66	11	1,140	103	742	27	243	13	330	43	189	3	11,084	1,074

CASE AND DEATH INCIDENCE OF INFECTIOUS DISEASES BY MONTHS FOR THE YEAR 1938.

Disease	January		February		March		April		May		June		July		August		September		October		November		December		TOTALS	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Anthrax	2	—	1	—	2	—	2	—	1	—	—	—	2	—	2	—	3	—	—	—	1	—	4	—	20	—
Cerebro-Spinal Meningitis	2	1	1	—	6	3	2	2	—	—	1	—	—	—	—	—	—	—	2	—	—	—	—	—	14	6
Chicken Pox	14	—	16	—	44	—	85	—	60	—	35	1	22	—	11	—	1	—	1	—	2	—	6	—	297	1
Diphtheria	38	2	16	1	14	2	8	2	5	—	5	1	9	—	13	2	21	1	30	2	60	5	37	1	256	19
Dysentery	16	1	5	—	13	1	9	—	32	—	34	3	24	4	28	4	51	5	30	3	32	3	29	4	303	28
Erysipelas	8	—	5	1	22	3	25	—	13	—	7	1	12	1	12	1	16	3	15	1	11	—	10	—	156	11
German Measles	—	—	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	—
Hydrophobia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	2	2	—	—	3	3
Influenza	—	—	—	—	1	—	—	—	—	—	21	—	—	—	1	1	1	—	—	—	22	—	—	—	46	1
Measles	670	21	624	21	533	22	448	13	254	14	238	12	169	33	163	27	40	9	5	—	38	2	37	1	3219	175
Mumps	33	—	40	—	70	—	117	—	25	—	21	1	10	—	3	—	4	—	9	—	84	—	12	—	428	1
Paratyphoid	11	—	9	—	7	—	3	—	7	—	14	—	23	—	16	1	11	—	10	—	12	—	9	—	132	1
Pneumonia	51	43	41	32	49	37	50	40	41	27	38	32	31	27	42	40	25	23	34	29	32	25	36	33	470	388
Poliomyelitis Acute	—	—	—	—	—	—	—	—	2	—	1	—	—	—	—	—	3	—	—	—	2	—	11	1	19	1
Puerperal Fever	5	1	2	1	4	—	1	—	3	1	2	1	2	1	—	—	—	—	1	1	—	—	2	—	22	6
Relapsing Fever	2	—	2	—	3	—	5	--	5	—	3	—	1	—	3	—	2	—	11	—	1	—	—	—	38	—
Scarlet Fever	6	—	4	—	2	—	6	—	11	—	2	—	4	—	1	—	2	-	9	—	10	—	10	—	67	—
Schistosomiasis	4	—	1	—	4	—	10	—	10	—	6	—	4	—	1	—	—	—	—	—	—	—	1	—	41	—
Typhoid	140	14	106	13	99	9	87	7	111	14	156	10	251	26	245	21	191	13	119	17	83	2	55	9	1643	155
Typhus	16	—	4	—	6	—	15	3	15	2	19	—	9	—	21	—	27	—	15	—	18	—	11	—	176	5
Undulant Fever	—	—	1	—	—	—	1	—	3	—	5	—	4	—	2	—	1	—	—	—	—	—	1	—	18	—
Whooping Cough	165	—	64	3	46	1	38	—	31	—	49	1	22	—	36	—	5	—	3	—	4	—	18	—	481	5
Ankylostomiasis	—	—	—	—	2	—	2	—	3	—	2	—	1	—	2	—	2	—	5	—	—	—	—	—	19	—
Blackwater Fever	—	—	—	—	—	—	—	—	1	1	1	1	—	—	—	—	—	—	—	—	—	—	—	—	2	2
Gonorrhoea	16	—	17	—	17	—	10	—	19	—	30	—	20	—	34	—	24	—	25	—	39	—	30	—	281	—
Leishmaniasis (Kala Azar)	—	—	—	—	1	—	2	—	—	—	4	1	—	—	—	—	1	—	—	—	—	—	—	—	8	1
Leprosy	1	—	1	3	—	2	1	—	1	—	2	—	—	—	—	—	—	—	—	1	1	—	—	—	7	6
Malaria	45	1	21	—	19	—	33	1	45	1	53	—	229	—	330	1	429	2	390	2	175	—	80	—	1849	8
Pellagra	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—
Rheumatic Fever	—	—	2	—	2	—	—	—	—	—	—	—	1	—	1	—	1	1	—	—	1	—	—	—	8	1
Syphilis	40	—	35	1	42	—	48	—	61	—	75	—	55	1	77	—	36	—	30	—	34	—	21	—	554	2
Tetanus	5	3	1	1	3	2	5	—	4	2	4	4	5	4	—	—	5	4	3	2	3	2	4	3	42	27
Tuberculosis	35	23	32	19	40	18	43	15	60	28	50	19	47	17	26	15	24	8	31	22	39	17	43	20	461	221
TOTALS	1326	110	1051	96	1051	100	1059	83	823	90	878	88	957	114	1070	113	926	69	779	81	697	58	467	72	11084	1074

CASE AND DEATH INCIDENCE OF TYPHOID BY RELIGION, SEX AND AGE GROUP, 1938.

AGE GROUPS	CHRISTIANS						MOSLEMS						JEWS						TOTALS					
	Males		Females		Totals		Males		Females		Totals		Males		Females		Totals		Males		Females		Totals	
	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.
0 — 5 years	9	1	7	—	16	1	49	4	27	7	76	11	18	—	11	—	29	—	76	5	45	7	121	12
5 — 10 ,,	37	5	33	1	70	6	183	18	116	12	299	30	34	2	23	1	57	3	254	25	172	14	426	39
10 — 15 ,,	30	2	28	2	58	4	145	15	123	10	268	25	25	—	28	—	53	—	200	17	179	12	379	29
15 — 20 ,,	15	2	12	2	27	4	64	10	67	4	131	14	33	1	16	1	49	2	112	13	95	7	207	20
20 — 25 ,,	16	—	12	1	28	1	45	2	27	4	72	6	20	1	26	1	46	2	81	3	65	6	146	9
25 — 30 ,,	13	2	5	1	18	3	38	3	25	6	63	9	39	3	22	—	61	3	90	8	52	7	142	15
30 — 35 ,,	4	1	5	1	9	2	25	2	16	4	41	6	16	—	7	1	23	1	45	3	28	6	73	9
35 — 40 ,,	—	—	2	—	2	—	17	2	12	1	29	3	9	—	6	1	15	1	26	2	20	2	46	4
40 — 45 ,,	2	—	3	—	5	—	9	2	5	—	14	2	3	—	4	—	7	—	14	2	12	—	26	2
45 — 50 ,,	1	1	3	1	4	2	10	2	5	1	15	3	—	—	5	2	5	2	11	3	13	4	24	7
50 — 55 ,,	1	—	—	—	1	—	4	—	9	1	13	1	1	—	—	—	1	—	6	—	9	1	15	1
55 — 60 ,,	—	—	1	—	1	—	3	2	5	—	8	2	1	—	4	1	5	1	4	2	10	1	14	3
60 — 65 ,,	—	—	—	—	—	—	5	1	5	—	10	1	1	—	2	—	3	—	6	1	7	—	13	1
65 — 70 ,,	1	—	—	—	1	—	1	1	2	—	3	1	—	—	—	—	—	—	2	1	2	—	4	1
70 — 75 ,,	—	—	1	—	1	—	—	—	3	2	3	2	—	—	—	—	—	—	—	—	4	2	4	2
75 — 80 ,,	1	—	—	—	1	—	1	—	—	—	1	—	—	—	—	—	—	—	2	—	—	—	2	—
80 — 85 ,,	—	—	1	1	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	1	1
TOTALS	130	14	113	10	243	24	599	64	447	52	1046	116	200	7	154	8	354	15	929	85	714	70	1643	155

TUBERCULOSIS CLASSIFICATION—1938.

TOWNS.

	Respiratory System		Meninges and Central Nervous System, Generally		Intestines & Peritoneum		Vertebral Column		Joints		Skin and Sub-Cutaneous Cellular Tissue		Bones (Vertebral Column excluded)		Lymphatic System (Mesenteric and Retroperitoneal Glands excepted)		Genito-Urinary System		Organs other than the above		Disseminated Acute		Disseminated Chronic		TOTALS	
	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.
Jerusalem	92	26	5	2	4	2	1	—	—	—	—	—	1	1	—	—	—	—	2	1	—	—	1	1	106	33
Ramallah	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2
Bethlehem	2	3	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	4
Hebron	2	1	—	—	—	—	—	—	—	—	—	—	2	—		—	—	—	—	—	—	—	—	—	4	1
Beersheba	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
Jaffa	95	32	9	6	3	3	2	—	1	—	1	—	—	—	3	—	—	—	—	—	—	—	—	—	114	41
Tel-Aviv	20	15	1	1	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	23	17
Ramleh	1	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	2
Gaza	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2
Majdal	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
Haifa	54	25	—	3	3	1	1	1	1	—	1	—	1	—	3	—	—	—	—	—	—	—	—	—	64	30
Acre & Prisons	19	1	—	—	—	—	—	—	1	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	22	1
Nazareth	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
Nablus	16	5	—	—	2	1	—	—	—	—	—	-	7	3	8	4	—	—	3	2	—	—	4	2	40	17
Tulkarm	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Tiberias	1	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	2
Safad	3	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	12
Jenin	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
Totals Towns	313	133	15	12	14	9	4	1	3	—	2	—	12	4	15	4	—	—	5	3	—	—	6	3	389	169
Totals Villages	54	43	5	3	5	4	1	—	3	—	1	—	1	—	1	1	—	—	—	—	1	1	—	—	72	52
Grand Totals	367	176	20	15	19	13	5	1	6	—	3	—	13	4	16	5	—	—	5	3	1	1	6	3	461	221

VILLAGES.

	Respiratory System		Meninges and Central Nervous System, Generally		Intestines & Peritoneum		Vertebral Column		Joints		Skin and Sub-Cutaneous Cellular Tissue		Bones (Vertebral Column excluded)		Lymphatic System (Mesenteric and Retroperitoneal Glands excepted		Genito-Urinary System		Organs other than the above		Disseminated Acute		Disseminated Chronic		TOTALS	
	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.
Jerusalem	7	2	—	—	3	2	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12	4
Ramallah	—	1	—	—	—	—	—	—	—	—	—	—	—	—	-	—	—	—	—	—	—	—	—	—	—	1
Bethlehem	5	4	2	2	—	—	—	—	—	—	—	—	—	—	-	—	—	—	—	—	—	—	—	—	7	6
Hebron	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Beersheba	5	2	—	—	1	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	7	3
Jaffa	28	6	3	1	1	1	—	—	2	—	—	—	—	—	—	—	—	—	—	—	1	1	—	—	35	9
Tel-Aviv	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ramleh	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
Gaza	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—
Majdal	—	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4
Haifa	1	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	3
Acre & Prisons	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—
Nazareth	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Nablus	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tulkarm	4	4	—	—	—	—	—	—	—	—	—	—	1	—	1	1	—	—	—	—	—	—	—	—	6	5
Tiberias	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Safad	—	14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14
Jenin	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
Totals Towns	54	43	5	3	5	4	1	—	3	—	1	—	1	—	1	1	—	—	—	—	1	1	—	—	72	52
Totals Villages																										
Grand Totals																										

SECTION III.

ENDEMIC DISEASES.

Malaria, General Observations.

43. The rainfall of the winter 1937/38 averaged 627 mms. as recorded at stations in use last year as compared with 497.7 mms. in 1936/37.

The following chart indicates the rainfall in the various districts of the country as recorded at present :—

RAINFALL—JUNE, 1937—MAY, 1938.

Area	No. of stations	Total mms.	Area Average
Lake Huleh	4	2519.9	629.97
Haifa-Acre Plain	7	5783.2	826.17
Hills of Galilee	9	7486.9	831.88
Carmel Range	5	3624.8	724.96
Plain of Esdraelon	10	5988.0	598.80
Ain Harod-Beisan Plain	6	2898.9	483.15
Jordan Valley	14	4203.4	300.24
Coastal Plain	37	25200.1	681.08
Samarian-Judean Hills	21	13134.6	625.47
Negev	6	1786.6	297.77
	119	72626.4	5999.49
Average —		610.3	599.94
Highest Record Mi'ilya Hills of Galilee		1175.4	
Lowest Record Dead Sea South No. 1		43.4	

A feature which has a considerable influence on malarial incidence in Palestine is the late spring rainfall. A failure of these rains has a favourable influence, as the drying up of temporary water collections and swamps before the anopheles breeding season begins is thereby facilitated. Late spring rains prolong such drying up into the anopheline season and so necessitate additional drainage work and control operations.

During the year under review a certain amount of additional work of this nature was required for the reason noted above.

A further unfavourable feature of the year was the increasingly disturbed political situation which rendered regular supervision of mosquito breeding places in both rural and minor urban areas a matter of difficulty and danger, and it is again therefore a pleasant duty to record the loyalty displayed by the staff in general under the trying conditions prevailing.

Notices were served on all land owners and villagers throughout the country as usual defining the work which they would be called on to provide funds for, or to execute under the supervision of the Department. In view of the general disturbances the response to these demands may be said to have been highly satisfactory on the whole.

The considerably increased military forces in the country during the year and their varied and continuous dispositions created a separate problem. The cooperation exercised, however, and the intensification of routine measures in areas where troops were stationed succeeded in the production of only a small number of fresh infections among them.

That this disease has not produced any actual increased damaging effect on the community as a whole in spite of existing troubles is therefore a matter for satisfaction. That this result is due to the system of observation in force, and to the prompt action taken on any evidence of increased incidence in any area, may be accepted as reasonable explanations.

67 mosquito catching stations now operate as information guides to dangerous breeding grounds and these are being considerably increased in the near future.

Comparative Statistics of the Incidence of Malaria.

44. The usual comparative statistics which are provided annually appear in the tables which follow. No epidemic manifestation was recorded in this disease during 1938. Urban incidence was again negligible while the general incidence in the country as a whole continued to be low.

It will be seen from the table below that the number of cases of malaria treated by the public dispensaries was approximately the same as last year. The percentage incidence of malaria as compared with other conditions also remained steady.

PERCENTAGE OF MALARIA CASES AMONG DISPENSARY PATIENTS, 1931—1938.

Year	Total No. of suffering patients	No. of patients treated for malaria	Percentage of malaria patients
1931	458,941	8,147	1.8
1932	495,583	2,984	0.6
1933	528,186	3,330	0.6
1934	641,597	5,318	0.8
1935	747,410	5,552	0.7
1936	765,216	4,081	0.5
1937	880,141	4,805	0.6
1938	869,171	4,648	0.5

Spleen Rates.

45. The examination of school chidren for the presence of splenic enlargement was, as usual, carried out towards the end of the year with the following results as compared with previous years :—

SPLEEN RATES.

	No. examined	1938	1937	1936	1935
Urban	35,874	1.4	1.5	1.8	1.7
Rural	35,076	4.3	4.7	6.7	7.4

These figures show a very gratifying decline as compared with previous years, particularly gratifying in view of the general difficulty of control of this disease in rural areas during the year under review.

Spleen rates again continued to be insignificant with the exception of Beisan (56.2%), Tiberias (6.8%) and Jenin (3.7%) in the urban areas, and Tiberias (28.6%), Safad (28.2%), Tulkarm (8.5%) and Jenin (5.6%) in the rural sub-districts. In Beersheba and Nablus sub-districts the rates show a considerable decrease as compared with the previous year (2.1% as compared with 30.6% and 2.4% with 10.3%) while in the urban areas Nablus again shows a drop from 4.2% to 0.1%. Only in Jenin has there been any appreciable rise (from 0.2% to 3.7%).

SPLEEN RATE TABLE FOR 5 YEARS.

Year	No. of towns or villages	No. of children examined	No. of children with enlarged spleens. Degree of enlargement			Spleen Rates
			Slight	Moderate	Great	
			TOWN SCHOOL CHILDREN.			
1934	19	22,666	331	34	7	1.3
1935	19	26,278	249	151	48	1.7
1936	19	24,012	298	114	13	1.8
1937	19	38,792	427	142	19	1.5
1938	19	35,874	316	139	29	1,4
			VILLAGE SCHOOL CHILDREN.			
1934	549	41,587	1738	435	98	5.5
1935	583	45,765	2274	906	193	7.4
1936	515	42,039	1644	381	89	6.7
1937	454	43,883	1577	430	75	4.7
1938	357	35,076	889	502	109	4.3

COMBINED SPLEEN RATES FOR ADMINISTRATIVE DISTRICTS FOR PAST 5 YEARS.

Medical District	1934	1935	1936	1937	1938
Jerusalem	0.56	0.63	0.68	2.38	0.94
Jaffa	0.37	0.45	0.34	0.36	0.72
Haifa	0.68	4.56	1.38	1.78	1.09
Samaria & Galilee	11.71	11.15	14.36	10.75	9.98

Routine antimalarial measures were again intensified in areas where troops had to be stationed. The very considerably increased general military activity with night patrols and pickets all over the country tended to create a special problem. In all the circumstances, the small number of fresh infections (40 B.T., 10 M.T., 6 Clinical) as compared with 40 in 1937 and 117 in 1936, may be considered to be highly satisfactory. In addition 14 relapse cases were recorded (13 B.T. and 1 M.T.).

Routine Antimalarial Measures.

46. Expansion in routine work in both urban and rural areas can again be recorded, although the generally unsettled state of the country probably rendered control of malarial conditions in the rural districts more difficult in this disease than in any other. Nevertheless, routine measures were well maintained and general incidence continued to be negligible. That this disease has not caused any real damaging effect on the country in the year under review is remarkable in view of the unsettled conditions existing. The work of previous years, the system of observation in force, and the prompt action taken on any increase in incidence in any area must receive due regard in this respect.

67 mosquito catching stations now operate and these are being considerably augmented in view of the valuable information in regard to dangerous breeding grounds which can thus be obtained. 9,200 mosquitoes were examined with a maximum rise in the May to September period (2046 in July).

As noted in previous reports, routine work in both towns and rural areas will continue to increase as further potentially dangerous breeding places are discovered and brought under control, until complete drainage systems are available, particularly in the larger towns. At the moment there are 163,675 possible breeding places in the routine inspection registers of the principal towns. Some 3¾ million inspections were made and some 750,000 oilings performed during the year under review.

Anopheles were only found on 40 occasions; culex on 31,081, generally speaking in the septic tanks of house drainage systems. In all 8,288 potential breeding places were rendered mosquito proof and 306 pumps fitted. 243 prosecutions were conducted under the Antimalarial Ordinance.

Turning to village areas, 341,870 oilings were carried out in cisterns, while 1,680 places were mosquito proofed. Only 84 prosecutions were necessary, although mosquito breeding was found on 22,468 occasions. Over 50,000 breeding places are now on the weekly inspection lists. Statistics on the above will be found tabulated in the tables following.

The system of control in wadis, streams and swamps has already been briefly noted. The permanent staff was supplemented from time to time by foremen supervisors employed on a temporary basis as occasion demanded to maintain effective anti-larval control. Thus the Department provided at its own cost 26,766 days of labour of this nature. Local Councils supplied additional labour to the extent of 3,455 working days, while private persons, landlords, villagers and settlers contributed 44,950 working days. In all 987,848 metres were dealt with.

Thus a practical demonstration of the satisfactory reduction of endemic malaria may be said to have been presented by the constant anti-larval measures recorded above during recent years.

Troop movements, involving a susceptible and constantly moving population, has further and forcibly demonstrated the effectiveness of the method of control practised by the Department of Health in a country with a malarial season extending yearly from April to November.

Antimalarial Drainage Schemes.

47. The existing financial stringency rendered impossible the carrying out of any new major works such as that at Naamein River—Haifa Bay. Activities in this direction were therefore concentrated on the completion or improvement of those in existence, the more important of which are noted below.

Birket Hanoun and Birket Samir.

The pumping plant supplied last year to these two tracts of water was rendered into a portable apparatus for use in other areas. Thus important water holding places can now be pumped dry as occasion demands before the mosquito breeding season commences. In the case of the Jelil Marsh a permanent pipe line was laid and the owners paid the cost of this and of rendering the pumping plant referred to portable.

Rubin Marsh.

The drainage of this important marsh was completed in 1930. Since then the main drains have deteriorated from time to time owing to lack of proper maintenance by local owners. Important improvement works were therefore started in 1936 and these were carried a step further during the year under review. It is hoped to extend these still further in the near future by a scheme of underground drainage which has been prepared, and which will do away with a large section of the existing surface drainage.

Birket Ramadan.

This very important and large drainage scheme, which was completed in 1937 after 3 years work, was recently considerably damaged by semi-nomadic cultivators. Filling operations on a wide scale were therefore started late in the year to control the dangerous mosquito breeding which would have arisen. That this area should be fully and completed controlled as soon as possible is most important in view of the fact that such a large area of country has been freed from malaria, and rendered suitable for cultivation by the operations already undertaken.

Basset Ra'anana.

A drainage scheme of some magnitude which was started in this area in the summer of 1937 by the Local Council of Ra'anana under the control and supervision of the Department of Health was completed in the year under review. The marsh has been fully controlled thereby and the work showed very satisfactory results during the heaviest rains.

Wadi Kabbani.

The scheme in this area which covered a wide marsh, had been only partially completed. Work was continued, particularly as heavy rains and floods rendered regrading and repair essential. An effort will be made to complete the work in the near future.

Lake Tiberias Shore.

As noted in a previous report, measures to control malaria on the shore of this important and large stretch of water were rendered essential owing to the artificial raising and lowering of the water level by the operations of the Palestine Electric Corporation. Further successful filling and grading works were continued.

ANTIMALARIA STATISTICS FOR THE YEAR 1938.

TOWNS.

Month	Number of fresh possible breeding places discovered				Number of Places							Number of prosecutions	Number of kilos of solar oil used
						Breeding							
	Wells	Cisterns	Other Places	Cesspits	Inspected	Anopheles	Culex	Anopheles and culex	Oiled	Made mosquito proof by sealing, covering or other means	To which pumps fitted		
January	8	37	552	234	304757	—	1275	—	55307	1121	37	6	3336
February	—	60	722	261	251823	—	607	1	44444	669	16	23	2739
March	—	26	735	300	320843	1	1406	—	57873	1682	84	6	3551
April	3	12	323	119	318927	1	2949	—	63718	493	13	51	5651
May	12	4	650	262	336806	4	4073	1	69087	515	29	60	6131
June	14	15	234	188	322229	—	4210	—	69447	647	34	1	6648
July	2	15	254	355	321888	—	3736	—	69208	493	14	38	6895
August	1	14	412	320	344227	3	3545	—	73246	1058	22	13	7052
September	1	8	154	235	325307	5	2932	2	70298	450	20	16	6519
October	—	5	339	257	289279	13	2695	4	61442	325	18	1	5102
November	—	5	221	138	276049	4	2250	1	50182	371	10	10	4138
December	—	5	503	120	321961	—	1403	—	60913	464	9	18	4938
TOTAL	41	206	5099	2789	3734096	31	31081	9	745165	8288	306	243	62700

ANTIMALARIA STATISTICS FOR THE YEAR 1938.

VILLAGES.

	No. of visits to villages	No. of new wells and cisterns found	No. of other new possible breeding places found	No. of places in which mosquito larvae found	No. of places oiled	No. of places closed, repaired and made mosquito proof	No. of persons treated with quinine	No. of prosecutions	No. of kilos of paraffin used	No. of kilos of solar oil used	Grammes of quinine expended
January	1588	74	122	2117	27361	166	58	6	0.800	4823	450
February	1439	24	7	1802	24854	81	29	2	—	4577	218
March	1429	125	344	1549	24932	427	28	3	—	4082	214
April	1577	82	26	2576	31787	271	50	4	27.602	5729	386
May	1608	8	39	2525	32361	22	35	51	113.151	6685	272
June	1647	15	11	1833	33341	425	33	8	99.176	6165	258
July	1545	21	5	1820	32454	74	50	2	114.101	6448	376
August	1474	8	1	2057	31138	15	41	3	117.701	6860	278
September	1423	—	—	1321	28633	156	169	4	104.401	4192	819
October	1362	—	—	1532	25285	2	57	—	70.326	4405	339
November	1088	5	12	1456	25066	5	40	1	35.000	4046	310
December	1245	3	5	1880	24658	6	45	—	12.000	4212	288
TOTAL	17425	365	572	22468	341870	1650	635	84	694.258	62224	4208

Tuberculosis.

48. As noted in previous reports, a survey of tuberculosis in Palestine was carried out in 1935 which showed this to be one of the important endemic diseases in this country. The scheme for a tuberculosis service originally proposed to meet the situation, based on the recommendations contained in this Survey Report, was considerably modified on grounds of economy, and approved in this form by the Secretary of State. This envisaged the establishment of a 56 bedded sanatorium at Nazareth with a general dispensary service for the whole country. Further financial stringency has unfortunately deferred any advance on these lines, however, and there is thus little to report on the prevention and control of what is undoubtedly one of the most important diseases in Palestine.

The tuberculosis clinics which have been established in the larger centres continued to do good work, however, and the attendances recorded below clearly show that the population in general would respond to a well organised service.

Lack of institutional treatment puts a definite limit on the scope of the work undertaken, but careful records are kept of all cases seen, and efforts at home control are followed as far as possible. Outpatient advice and ambulatory treatment is the general rule, with hospitalization of picked cases only for pneumothorax and phrenocectomy at Jerusalem and Haifa. 359 artificial pneumothorax inductions and refills were administered during the year under review, while phrenocectomy was carried out in five instances with very encouraging results.

PRINCIPAL GOVERNMENT CLINICS FOR TUBERCULOSIS.

	1936	1937	1938
Total attendances	2,338	3,724	7,132
New Cases	121	331	292

Of the new cases recorded, 185 were from amongst males and 107 from females. 223 were of the pulmonary type (150 males and 73 females) and 69 non-pulmonary (35 males and 34 females).

581 cases were arrested during the year (401 males and 180 females), while 48 males and 34 females died of the disease.

As the organization under review is a comparatively new one, it will be appreciated that any figures given must be defective to a considerable degree. The figures given mainly represent the Arab community, as the majority of Jewish cases are catered for by the Jewish Tuberculosis League, although Jewish cases are equally welcome at our clinics.

Taking the statistics available for the country as a whole, the table on page 48 indicates the general returns from towns and villages for the year classified as far as possible by type.

Notifications for the year were given as 461 cases with 221 deaths. These figures compare with 547 cases and 237 deaths for 1937, and 438 and 201 respectively for 1936.

The Jewish Tuberculosis League carried on its activities as in previous years. Government provides financial assistance for the provision of 30 beds for this disease at Safad Hospital, while the League conducts a small sanatorium near Jerusalem. In addition a few children are accommodated at the Mount Carmel Sanatorium at Haifa during the summer months.

Ankylostomiasis.

49. The campaign for the investigation and treatment of hookworm disease was continued during 1938, and followed similar lines to previous years, although the troubled situation of the country necessarily curtailed work of such a rural nature as this. In fact the activities of the special unit employed on the campaign actually had to be suspended towards the end of the year. In consequence, little was possible in new areas where propaganda through talks and demonstrations in villages, in the first instance, is such an essential and important factor.

The principal features of the investigation may be said to be the treatment and re-treatment of infected individuals in surveyed areas, the re-survey of previously treated cases, and the extension of the campaign to areas not previously examined. As the field work became more and more difficult, activity had to be diverted to the more urban areas. The year's work may thus be said to have covered urban, and rural Arab and rural Jewish communities. In all, 3,713 individuals were examined from areas on the coastal plain in the Jaffa district. These, with the exception of the examinations made in Jaffa itself, form two clusters of rural settled areas. In one, the soil is of a sandy nature: in the other, clay predominates. The villages in question were especially chosen for investigation as *citrus cultivation* forms an important industry in this region of the country, and in recent years this cultivation, while rapidly extending, has been marked by a significant extension of this disease. The percentage infestation rate varied from 2.6 to 8.0 in the urban Arab districts: from 14.2 to 59.9 in the rural Arab areas: from nil to 5.7 in the rural Jewish. The low incidence in the urban group is what one would expect. The incidence in the Jewish and Arab groups is significant. Soil does not fully account for the difference, as high and low infestation centres are in immediate vicinity on soil of the same nature. Neither does race, as such, offer a plausible explanation. The influencing factor, in fact, lies in the methods of sanitation adopted in the various areas and in the wearing of shoes by Jewish labourers.

These findings tend to further confirm the previously expressed opinion that the heavy incidence of the disease in this area is definitely associated with citrus cultivation.

The investigations of the last six years show that a moderate heavy infestation extends throughout the whole coastal plain of Palestine, and that sporadic infestation exists in such areas as the Jordan Valley. There is, therefore, reason to suspect at least a moderate degree of infestation in most of the population, with a heavy incidence in certain areas connected more especially with certain occupations.

Anti-hookworm measures must therefore be considered to be a very important item in the health control of the rural communities. Thus rural sanitary measures, particularly the introduction of latrines in village areas started some seven years ago, continued to receive due attention. Unfortunately the scheme for the sanitation of the orange groves in collaboration with grove owners had to be postponed owing to the troubled conditions existing in the areas concerned, a very unfortunate postponement, as the Department of Health is convinced that these groves act to a very important extent in re-infestation.

Conjointly with the survey work, measures for the control of the disease were carried out as far as circumstances permitted. These consisted, in the main, of educational propaganda, sanitary control, and treatment. Some reference has already been made above to the predominating importance of proper sanitation in this disease. While nothing is possible in ignorant communities without adequate propaganda, the following table will give some indication of the effectiveness of proper treatment. A comparison is given of the percentage incidence of hookworm, and the intensity of infestation as represented by the geometric mean eggs per cubic centimetre shown by age and sex groups.

Age Group	Before Treatment				After First Treatment			
	Percentage Incidence		Geometric Mean		Percentage Incidence		Geometric Mean	
	M	F	M	F	M	F	M	F
0 — 4	100	100	1390	1445	57	48	722	713
5 — 9	100	100	1310	1585	76	51	658	599
10 — 14	100	100	1866	1496	65	50	851	681
15 — 19	100	100	2154	1707	66	50	631	1000
20 — 29	100	100	2219	2089	69	70	735	936
30 — 39	100	100	2202	2154	62	33	677	692
40 — 59	100	100	2357	1540	60	31	699	1096
60 & over	100	100	2188	2188	60	0	1166	0

Whereas all the individuals of the groups were found infected at the first examination, only some half are infected after only one treatment. The reduction in the infestation rate is apparently more marked in females than in males.

It is also found that there is a marked reduction in the intensity of infestation in those who continue to harbour the disease.

Oil of chenopodium was the drug in use and some 2,000 treatments were carried out.

An effort will be made during the coming year to carry out treatment on a more "mass" basis system, and extend it to second and third stages. The propaganda campaign will also be extended. The real problem to be faced, however, is the prevention of re-infestation, particularly in the considerable areas under citrus cultivation. This is a problem which is receiving due consideration. A scheme will be introduced to meet it as soon as the country is safe to move about in again.

Schistosomiasis and Other Helminths.

50—(1) Three definitely endemic foci of schistosomiasis in Palestine were demonstrated during the year 1937: the Auja Basin, Nahr Rubin and Nahr Suqreir, all in the southern coastal area.

The survey of this disease is the duty of a small special unit of the Department and the work comprises field investigation in suspected localities, incidence of infected molluscs, and human infestation. It was carried a stage further in 1938 when an attempt was made to find out what the incidence of the disease actually was in areas at a distance from those of proven endemicity. Over 1,800 persons (1,325 males and 497 females) were examined in this connection: only 12 (7 males and 5 females) were found to be infected—a positive percentage of 0.66. While this investigation is still in a far too early stage to base general conclusions on, it is probable that schistosomiasis is not restricted to certain specified districts: that a low incidence possibly exists in a much wider area.

In the areas of definite endemicity some 11.4% of the population was found to be infected with S.haematobium: only some 0.26% with S.mansoni.

At ordinary times the Rubin River is probably the most important focus of dissemination in this disease by reason of the annual Moslem festival held in its vicinity, which draws thousands of persons to the area for several weeks each year. This no longer operated during 1938, a fortunate fact in view of the financial stringency which prevented a proper expansion of the control work originally envisaged.

So far control has been limited to treatment of infected individuals in hospital: to the treatment of infected waterways with copper sulphate: to the intensive collection of incriminating molluscs: and to propaganda in reference to bathing in endemic areas. It is possible that benefit has also been derived from antimalarial measures in this area, by the clearing of channels and the spraying of Paris Green.

(2) A number of other helminths were met with during the examinations of stools for hookworm ova according to the following table:—

	No. examined	Ascaris	Trichuris	Hymenolepis	Tænia	Trichostrongylus	Enterobius	Strongyloides strecoralis
		Percentage found positive						
Urban male children	821	40.2	14.4	9.9	0 4	Nil	3.7	1.3
Rural, Arab	2691	3.8	0.5	6.5	0.9	0.3	2.1	0.4
Rural, Jew	201	2.0	1.0	0.5	Nil	Nil	2.0	Nil

A significant feature is the high Ascaris and Trichuris amongst urban male school children. A similar find was noted in 1937 in girls. It will be noted that all worms show a low incidence in the rural Jewish groups as compared with the Arab.

Village Sanitation.

51. As noted above, some further progress was made with the installation of latrines of the bore-hole and tar-barrel types in village and rural areas, although nothing has been possible as yet in the orange groves owing to the particularly disturbed conditions prevailing in the districts given over to this important industry. The connection of the latter with hookworm infestation has been sufficiently stressed.

Inspection of latrines in use and scavenging control in houses are now a routine in most rural centres of population.

Treatment of Ophthalmic Disease.

52. Apart from ophthalmic work carried out at general outpatient dispensaries at which over 7,700 cases received attention, special centres to deal with eye disease only functioned in 11 towns, with first aid units operating in 23 villages. These recorded 922,461 attendances throughout the year under review, although a number only worked during the the hot dry-weather season. In addition, 3 village centres worked for short periods to deal with localised epidemics, while a special mobile unit carried on satisfactorily in 12 village areas not served by the more permanent clinics in the southern district, dealing with 22,668 persons.

The School Medical Service of the Department also continued to carry out a considerable amount of eye disease treatment as a part of its usual routine, recording total attendances of 1,115,188 and 1,688,734 from town and village schools respectively.

Ophthalmic services in Palestine were organised on the present basis in 1933 to deal with the wide-spread acute purulent conjunctivitis prevalent throughout the summer months, and have been progressively expanded ever since as available funds permitted. During the year under review an effort has been made to improve the "follow up" observation and treatment of the severer cases, particularly during the winter months. There is little doubt that these services have done much to limit the very high percentage of blindness amongst the Arab population, and to control the high incidence of trachoma.

Cases, especially perforating ulcer cases, requiring operative treatment are either dealt with at the main clinics if of a simple nature, or sent to the Ophthalmic Hospital of the Order of St. John in Jerusalem. This hospital, with its 45 beds, dealt with 768 inpatients and 14,115 outpatients during the year under review.

The following figures indicate how little the dangers of medical work in rural areas throughout the year under review affected the Department of Health in the control of one of the most important diseases in the country :—

Year	Total Attendances	New Cases
1934	654,469	66,842
1935	755,164	64,745
1936	864,647	63,480
1937	990,837	72,673
1938	945,129	64,591

In all, some 86,055 new cases of this disease were seen by officers of the Department of Health during the year.

The following table indicates the percentages of the more important complications as compared with previous years :—

Condition	Percentage of new cases seen in special centres				
	1934	1935	1936	1937	1938
Epidemic acute conjunctivitis	47	52	43	48	42
Epidemic acute conjunctivitis complicated by corneal ulceration	2	3	1½	1½	1½
Trachoma	70	70	69	66	70
Trachoma with corneal ulceration	11	6	8	8	13
Total corneal ulceration	14	10	11	11	15
Blind in one eye	4	4	4	4	4
Blind in both eyes	1	1	1	½	1

It will be seen that while epidemic acute conjunctivitis records the lowest incidence over the last five years, with a considerable drop as compared with 1937, there has been a marked rise in the total corneal ulceration ratio, an unsatisfactory feature due to delay in treatment resulting from the disturbances. Trachoma still continues to be an eye condition of outstanding importance.

SUMMARY OF OPHTHALMIC RETURNS — 1938.

Location	Total Attendances	Number of New Patients	No. Admitted to Hospital	Operations		Classification of conditions found in new patients											Remarks
				Trichiasis	Other Conditions	Clear Lids	Acute Conjunctivitis	Acute Conjunctivitis with Corneal Ulceration	Trachoma	Trachoma with Corneal Ulceration	Corneal Ulcer other than above	Corneal Conditions other than Ulcers	Endophthalmia	Varia	Blind in both eyes	Blind on one eye	
Beersheba	35393	750	1	—	—	332	342	10	418	23	—	1	13	46	2	30	
Gaza	101742	2789	1	8	6	704	1258	16	2085	170	17	52	3	733	2	159	
Acre	34844	3150	—	9	80	1082	1868	44	2068	198	10	112	27	968	22	51	
Nablus	53945	772	—	—	3	249	215	6	523	36	9	37	5	209	1	6	
Tulkarem	28559	5499	—	18	9	2049	3535	89	3450	545	42	264	94	562	22	143	
Jaffa	42971	3470	—	—	—	982	1427	90	2488	477	3	406	20	900	6	170	
Ramleh	44263	4265	—	—	11	553	667	25	3712	791	33	336	4	1335	23	283	
Safad	19029	4994	—	—	—	2261	2079	4	2733	221	2	467	—	776	3	97	
Hebron	62107	6392	—	62	72	3183	2178	49	3209	400	34	788	150	2371	32	274	
Majdal	87603	3670	—	36	14	514	1772	284	3156	1771	9	1876	225	1845	96	253	
Haifa	2358	368	—	3	2	105	81	3	263	88	28	17	16	39	16	22	
Tarshiha	19767	290	—	—	—	193	216	—	97	40	53	47	—	75	—	1	
Biddiyeh	22524	1422	—	—	—	401	699	48	1021	270	4	75	2	2	5	10	
Yahudiyeh	27375	2454	—	—	—	184	480	14	2270	—	—	—	—	—	18	77	
Beit Nuba	39929	2800	—	—	—	572	678	32	2228	—	—	—	—	—	23	91	
Beit Jibrin	24242	1449	—	61	161	560	607	1	889	67	2	148	33	373	7	106	
Ajjur	26599	1235	—	—	—	429	410	11	806	64	8	314	80	434	10	60	
Tarqomia	27063	1539	—	—	34	627	640	3	912	105	4	39	18	447	1	27	
Khan Yunes	30876	898	—	—	—	480	779	16	418	31	5	67	12	127	3	11	
Anabta	11853	1673	—	—	—	629	782	17	1044	76	8	123	5	163	4	42	7 months
Yatta	13031	944	—	—	—	471	257	8	473	56	4	119	17	317	4	27	7 "
Beit Omar	19887	823	—	—	—	416	267	1	407	42	3	56	5	267	1	10	7 "
Dura	16390	719	—	—	—	360	247	6	359	45	3	95	9	195	—	13	7 "
Zeita	18361	1280	—	—	—	403	490	26	877	24	1	1	—	13	5	30	7 "
Yibna	22536	585	—	—	—	93	294	4	492	309	—	344	36	311	10	47	7 "
Mesmiya	20202	723	—	—	—	105	346	5	618	351	—	386	44	317	14	61	7 "
Bureir	16530	857	—	—	—	141	450	57	716	483	—	509	56	409	19	62	7 "
Falluja	20035	375	—	—	—	71	216	2	304	210	—	230	28	211	10	35	7 "
Esdud	12491	716	—	—	—	79	327	11	637	302	—	364	46	276	22	60	7 "
Yabad	4712	613	—	—	—	105	382	12	508	—	—	—	4	—	4	22	6 "
Qazazeh	9436	824	—	—	—	91	380	3	733	—	—	—	—	—	37	54	6 "
Arraba	2940	497	—	—	—	86	326	11	411	2	3	—	—	—	—	12	5 "
Beni Naim	1460	290	—	—	—	164	231	—	126	—	—	—	—	169	—	—	4 "
Dawaymeh	1408	212	—	—	—	125	184	—	87	—	—	—	—	65	—	—	3 "
Mobile Section	22668	5254	—	—	—	710	1807	81	4544	1357	1	1659	220	1327	112	414	7 "
TOTALS	945129	64591	2	197	392	19509	26917	989	45082	8554	286	8932	1172	15282	534	2760	

Venereal Diseases.

53. The present scheme of control may be said to have been established in 1936. Main treatment centres now function in Jerusalem, Jaffa, Haifa and Nablus, while every medical officer is encouraged to treat as many cases as possible in clinics throughout the country. In addition, a specially trained officer supervises the work in general, while on the female side two lady medical officers operate through the medium of gynaecological clinics among women.

The following table serves to show the progress made to date :—

	1936	1937	1938
Syphilis (all stages)	501	1696	1875
Soft Chancre	6	78	42
Gonorrhoea (all stages)	206	385	591
Total No. of attendances	9729	37020	42730
Total No. of injections given	6308	28236	21180

It will thus be seen that there has been considerable and rapid development in the work of this section of the Department of Health since the inauguration of the present campaign. A total attendance of 42,730—an increase of nearly 6,000 over the previous year's total—indicates that the main treatment centres functioned in a very highly satisfactory manner throughout the year in spite of the general disturbed state of the country, particularly in view of the fact that the work of certain clinics was greatly restricted, and almost ceased, towards the end of the year.

There appears to be a growing appreciation of early treatment, apart from the known general beneficial effects, and there is little doubt that the work of this section will rapidly expand under less troubled conditions, and so require a considerably increased expenditure. Facilities for the free treatment of seamen of all nationalities are available in special premises in the ports of Haifa and Jaffa.

The increase shown above in the figures for venereal diseases is no indication that the incidence of this group of diseases is increasing in Palestine. It merely indicates the results of systematic investigation and control, the more universally recognised value of modern methods of treatment and the results of improved methods.

Routine treatment was revised during the year and brought into line with the latest modern opinion. Standard schemes were issued as a guide to all clinics. Different compounds of the sulphanilamide group were introduced into the treatment of gonorrhoea in conjunction with anti-toxins, vaccines and irrigations. Anti-toxins did not appear to be very satisfactory. There is no doubt that while sulphanilamide and its derivatives have not given the startling results that some observers claim for these drugs, they have proved to be of considerable advantage in preventing the spread of infection to the posterior urethra and its adnexia, and in shortening the course of the disease in a high proportion of cases.

Educational measures formed a part of the system of control adopted, and lecture demonstrations were given from time to time to those sections of the community best adapted to benefit from such measures.

Endemic Syphilis.

54. The campaign against endemic syphilis was continued during the year under a full time medical officer and staff in the Hebron town area, but had to be discontinued in the village clinics in this district towards the latter part of the year owing to the increasing lack of security.

Out of 777 cases under treatment at the beginning of the year, 397 were successfully completed and put under observation. The campaign was extended to three new village centres. The whole population, amounting to 1340 people, was fully investigated. Of this number, 51 were found to be positive and were put under treatment at once, and another 51 required reinvestigation. Total attendances amounted to 10,808 and 8,515 injections were administered.

This endemic syphilis is usually acquired by infants and children. Parents may get it from their children. The child population is the reservoir of the disease. The disease, in fact, is unrelated to sex and is not looked upon with abhorrence or shame. In a dirty, careless, and untreated population thus infected, the facilities for the transfer of the spirochaete by non-sexual contact must be innumerable.

It is hoped to further extend this campaign into new areas and villages from time to time.

Statistics for the year 1938 are shown in the accompanying table :—

VENEREAL DISEASES RETURN FOR THE YEAR 1938.

	Syphilis		Soft Chancre		Gonorrhoea		Conditions other than Venereal		Totals		Grand Totals
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1. No. of cases remaining from before	564	559	26	—	224	7	33	2	847	568	1415
2. No. of cases resuming treatment or observation after interruption	15	96	1	—	9	—	—	15	25	111	136
3. No. of cases referred from other centres for same infection	8	21	—	—	1	—	—	—	9	21	30
4. No. of new cases:—											
Syphilis, Primary	29	7	—	—	—	—	—	—	29	7	36
Syphilis, Secondary	101	36	—	—	—	—	—	—	101	36	137
Syphilis, latent 1st Year	12	2	—	—	—	—	—	—	12	2	14
Syphilis, all other stages	129	266	—	—	—	—	—	—	129	266	395
Syphilis, congenital	6	24	—	—	—	—	—	—	6	24	30
Soft Chancre	—	—	15	—	—	—	—	—	15	—	15
Gonorrhoea, 1st Year	—	—	—	—	321	—	—	—	321	—	321
Gonorrhoea, later	—	—	—	—	27	2	—	—	27	2	29
Conditions Non-Venereal	—	—	—	—	—	—	185	344	185	344	529
Totals of 1, 2, 3 and 4	864	1011	42	—	582	9	218	361	1706	1381	3087
5. No. of cases that completed treatment and tests of cure	7	10	5	—	55	—	10	9	77	19	96
6. No. of cases that died	5	3	—	—	—	—	—	—	5	3	8
7. No. of cases that ceased attendance before completion	92	267	2	—	56	8	86	198	236	473	709
8. No. of cases referred to other centres or private practitioners	39	81	—	—	48	1	81	72	168	154	322
9. No. of cases remaining under treatment or observation	721	650	35	—	423	—	41	82	1220	732	1952
Totals of 5, 6, 7, 8 and 9.	864	1011	42	—	582	9	218	361	1706	1381	3087
10. No of total attendances	9708	10016	377	—	15570	4	603	6452	26258	16472	42730

	As.	Bi.	Hg.	Total
11. Total No. of Injections given	10712	10468	—	21180

	Microscopical		Serum Tests		
12. Pathological Work	For Spirochaetes	For Gonococci	Wass.	Other for S.	For Gonorrhoea
(a) No. of Special Examinations at Clinic	—	—	—	—	—
(b) No. of Special Examinations at Laboratory	139	1022	6363	93	—
(c) No. of C. S. F. Examinations at Laboratory	—	—	6	—	—
Total:—	139	1022	6369	93	—

SECTION IV.

MEDICAL.

Government and Municipal Hospitals. New Haifa Hospital.

55.—(1) There was an increase of 51 patients beds at the new Government Hospital, Haifa, compared to the number available at the old Hospital. Of this number 24 beds were provided, by expansion of the original scheme, for infectious cases from the Army and R.A.F. and for general maternity and infectious cases from Army and R.A.F. wives and families.

The Haifa Hospital now provides in the main block for 144 patients in surgical, medical and maternity sections, 76 patients in 5 infectious pavilions, two clinical assistants and 9 British Nursing Staff, 16 Palestinian nursing staff in main block and 26 probationer nursing staff in the 1st stage of the Nurses' Block, and 20 female and 14 male subordinate staff in the garage annex.

Outpatients, 3 operating theatres and their sterilising rooms, etc., X-Ray Section, Pathological and Chemical Laboratories and nurses' lecture rooms are situated in a 3 storied annex connected to the hospital by corridors.

Medical Officer's Consulting Rooms, Matron's, Steward's and Clerks' offices, Clinical Assistants' Rooms, pharmacy and admission centre, kitchens, staff dining rooms and stores occupy the ground floor.

Laundry, disinfecting plant, engine room, stores and mortuary are situated in the basement.

Expansion of the Hospital can be readily carried out by completion of the nursing staff annex and utilization of their quarters as wards.

Infectious accommodation can be expanded by means of additional pavilions for which space is available.

Other Hospital Expansion.

(2) The British Section at Jerusalem Hospital, Bute House annex, was expanded by 18 beds to provide (a) for cases from the much expanded British Section of the Police, (b) for cases from amongst the Army wives and families. This expansion was secured by finding new quarters in leased buildings for the British nursing staff and Palestinian nursing staff and conversion of their old quarters to wards.

Provision was made at the same time for consulting rooms and minor operating theatre for the Surgeon Specialist, for a small emergency isolation section, and for new kitchens. This expansion constituted one part of the provision for expanded Police force and for Army wives and children. The other part was an Infectious Diseases Hospital which was due for completion in the autumn of 1938. Owing to strikes, murder of the foreman and other reasons there was delay in the construction which consisted of an administration block containing nurses and other staff quarters and kitchen, an observation pavilion of 8 beds and an isolation pavilion of 14 beds, laundry and disinfecting annex and mortuary. Expansion by means of huts or tents will be possible in emergency.

Owing to an epidemic of typhoid fever in Nablus, Tulkarm and Jenin subdistricts it was necessary to expand Nablus Hospital. Matters came to a head when 130 cases, principally enterica, had to be accommodated in a hospital whose normal bed strength was 85.

A house adjacent was taken and put into condition to accommodate a part of the nursing staff. This allowed expansion of the hospital by 15 beds.

It is, however, obvious that the Nablus Hospital cannot compete with the sick, including infectious, from the 3 large districts of which it is the central Hospital. The overcrowding where typhoid fever is being dealt with is very unsatisfactory; surgical and medical cases have to be refused admission as these wards are utilized for typhoid cases.

We require expansion of this hospital, and a small hospital at Jenin. Both these projects have been advocated. Neither in this almost exclusively Arab district nor in others of the same character has hospital accommodation kept pace with the rapidly increasing population.

The same remark holds good as regards the Jewish population in certain areas, and in particular the rural or new settlement population in Jaffa area and in Haifa area. Any epidemic condition in those areas, or in the Arab areas mentioned, would expose an unsatisfactory situation.

The Department, as mentioned in 1937 report, put forward a project to meet the situation in Jaffa area, but it had to be refused on financial grounds.

At Safad the infectious hospital of 28 beds proved inadequate to deal with cases from the district. A small section of the hospital had to be used for Army and Police emergency cases. A project was put forward to increase the accommodation of the hospital, by the leasing and adaptation of an adjacent building, to allow of accommodation for this class of cases.

A large number of British Police are quartered in this area.

The project to construct a hospital at Ramleh was again postponed, while the natal Hospital project, one of the most urgent on the building programme, suffered the same fate.

Hospital Patients.

(3) The hospitals of the Government throughout Palestine worked at full pressure. The number of surgical cases due to the disturbances was a marked feature. In certain instances, such as the bomb explosions in the market at Haifa, and in the Old City of Jerusalem a large number of casualties had to be dealt with at short notice. The staff proved equal to the task on each occasion and did heroic work.

The daily average of beds occupied in Government hospitals and in the Government aided Tel-Aviv hospital was 771.5. There were 9,183 Moslems, 8,604 Jews, 2,689 Christians and 50 others treated in these hospitals during the year. The total sick days were 280,532 compared with 272,356 in 1937.

Patients treated included 184 of His Majesty's Forces, 6 Trans-Jordan Frontier Force, 588 British Police, 575 Palestinian Police, 165 Railway, 585 other Government employees, and 253 prisoners.

Government Dispensaries and Clinics.

56. Outpatient treatment is provided at 19 Government general clinics and 93 special clinics, ophthalmic, venereal, tubercular.

Government employees are treated free and the poor persons of any nationality are treated for a small fee or free if indigent.

In 12 villages, Government medical officers hold weekly clinics. Those selected form centres for populous areas. Ophthalmic and special clinics and 1st aid posts are held additional to the above.

The total attendance at Government outpatients exclusive of ophthalmic and special clinics were 443,330 compared with 459,878 in 1937. New cases numbered 177,638, compared to 181,487 in 1937.

The attendance at ophthalmic and special clinics and railway clinics is recorded in other sections of this report.

VOLUNTARY HOSPITALS, 1938.

Name and Location of Hospital	Nominal Bed-Strength	ADMISSIONS					Deaths	Discharges	Daily Average No. of Patients in Hospital
		Moslems	Christians	Jews	Unclassified and Other Religions	Totals			
JERUSALEM									
Ophthalmic Hospital of the Order of St. John of Jerusalem	45	614	149	5	—	768	—	782	30.7
St Louis (French) Hospital	150	737	595	12	—	1344	47	1313	43.3
Italian Hospital	60	352	568	27	—	947	23	914	24.2
Rothschild (Hadassah) Hospital	190	3	10	5286	—	5299	252	5033	181.2
English (*British Mission to Jews*) Hospital	70	3	51	713	—	767	5	810	43.4
Shaare Zedek Hospital	53	4	12	1079	—	1095	44	1046	27.8
Misgab Ladach Hospital	34	—	—	270	—	270	13	250	13.3
New Bicur Cholim Hospital	120	—	2	1316	—	1318	143	1181	50.8
Old Bicur Cholim Hospital	20	—	—	12	—	12	10	6	19.5
Lepers (International Moravian Society) Hospital	60	6	—	2	—	8	4	6	23.6
Deaconness (German) Hospital	80	696	843	13	—	1552	62	1503	51.2
Convalescent Home (Kupat Cholim) Motza	84	—	—	1217	—	1217	—	1156	73.3
BETHLEHEM.									
French Hospital	80	400	614	—	—	1014	22	997	41.9
HEBRON.									
St. Luke's (Jerusalem and the East) Hospital	32	659	9	—	—	668	41	630	18.4
JAFFA.									
French Hospital	110	828	277	13	—	1118	53	1079	34.2
German Hospital	20	48	153	2	—	203	3	200	5.2
Church Missionary Society Hospital	57	474	74	1	—	549	21	539	16.2
Beilinson (Kupat Cholim) Hospital, Petah Tiqva	66	1	15	3480	—	3496	86	3400	102.2
GAZA.									
Church Missionary Society Hospital	63	1126	42	1	—	1169	57	1114	28.2
HAIFA.									
Jewish Community Hospital	53	1	9	1797	—	1807	82	1703	67.5
Italian Hospital	50	201	225	96	6	528	17	496	21.0
German Hospital	40	337	306	89	15	747	43	715	23.5
NAZARETH.									
Edinburgh Medical Mission Society Hospital	72	1136	215	—	—	1351	64	1308	46.2
French Hospital	56	663	282	—	—	945	37	902	26.4
AFFULA.									
Kupat Cholim Hospital	72	3	3	1901	—	1907	40	1862	64.2
NABLUS.									
Church Missionary Society Hospital	45	572	61	—	—	633	17	627	14.1
TIBERIAS.									
United Free Church of Scotland Hospital	70	614	104	126	4	848	56	797	40.1
Jewish Community (Schweitzer) Hospital	30	7	2	1128	—	1137	18	1113	31.6
SAFAD.									
Hadassah Hospital for Tuberculous Patients	58	—	—	123	—	123	9	109	56.0
TOTALS	1940	9485	4621	18709	25	32840	1269	31591	1219.2

GOVERNMENT AND MUNICIPAL DISPENSARIES AND CLINICS EXCLUSIVE OF OPHTHALMIC AND OTHER SPECIAL CLINICS, 1938.

LOCATION	Total No. of Attendances	NEW CASES							
		Total New Cases	Diseases			Religions			
			Malaria	Eye Diseases	Other Diseases	Moslems	Christians	Jews	Other Religions
Jerusalem Dispensary	32571	21083	1	89	20993	16074	2970	2039	—
Ramallah Dispensary	7364	4542	1	393	4148	3246	1296	—	—
Hebron Dispensary	12037	10213	75	—	10138	10102	111	—	—
Beersheba Dispensary	16399	10639	70	—	10569	9965	674	—	—
Jaffa Dispensary	30156	11966	6	—	11960	10442	1283	241	—
Gaza Dispensary	12371	4815	—	—	4815	4731	84	—	—
Ramleh Dispensary	56994	13193	4	—	13189	12013	1154	26	—
Majdal Dispensary	28047	10364	—	—	10364	10125	239	—	—
Haifa Dispensary	30720	22224	400	520	21304	14250	6090	1739	145
Acre Dispensary	14709	7214	527	49	6638	6051	1026	117	20
Nablus Dispensary	41058	9544	317	—	9227	9118	426	—	—
Tulkarm Dispensary	18108	2584	36	—	2548	2535	41	5	3
Jenin Dispensary	23757	12849	426	1204	11219	12687	162	—	—
Beisan Dispensary	9208	4289	—	1789	2500	4003	286	—	—
Safad Dispensary	22527	7456	83	—	7373	6519	209	718	10
Tel Aviv Dispensary	3328	2618	33	67	2518	9	133	2476	—
Nazareth Medical Inspection Room	883	573	—	35	538	390	179	4	—
Tiberias Medical Inspection Room	6815	2226	—	850	1376	1990	180	56	—
Bethlehem Medical Inspection Room	2002	1068	113	—	955	746	322	—	—
Tel Aviv Municipal Dispensary	74276	18178	—	2711	15467	—	—	18178	—
TOTALS	443330	177638	2092	7707	167839	134996	16865	25599	178

TABLE OF PATIENTS IN GOVERNMENT, MUNICIPAL AND VOLUNTARY HOSPITALS, 1938.

Names of Hospitals	British		Other Foreigners			Palestinians			Totals		
	Jews	Christians	Jews	Moslems	Christians and Others	Jews	Moslems	Christians and Others	Jews	Moslems	Christians and Others
Misgab Ladach, Jerusalem	3	—	75	—	—	192	—	—	270	—	—
St. Louis (French), Jerusalem	—	—	8	7	98	4	730	497	12	737	595
Rothschild (Hadassah), Jerusalem	13	6	1948	—	2	3325	3	2	5286	3	10
Ophthalmic, Order of St. John, Jerusalem	—	2	—	—	—	5	614	147	5	614	149
British Mission to Jews, Jerusalem	2	9	2	—	6	709	3	36	713	3	51
Ezrath Nashim, Jerusalem	—	—	20	—	—	12	—	—	32	—	—
Shaare Zedek, Jerusalem	17	3	301	—	2	761	4	7	1079	4	12
Bicur Cholim (New), Jerusalem	—	—	435	—	—	881	—	2	1316	—	2
Bicur Cholim (Old), Jerusalem	—	—	5	—	—	7	—	—	12	—	—
Italian Hospital	—	1	3	—	48	24	352	519	27	352	568
German (Deaconness), Jerusalem	1	36	8	27	261	4	669	546	13	696	843
Convalescent Home (Kupat Cholim), Arza	—	—	—	—	—	1217	—	—	1217	—	—
French, Bethlehem	—	1	—	—	31	—	400	582	—	400	614
St. Luke's, Hebron	—	5	—	—	—	—	659	4	—	659	9
Church Missionary Society, Jaffa	—	6	—	—	—	1	474	68	1	474	74
French, Jaffa	—	—	2	7	25	11	821	252	13	828	277
German, Jaffa	—	—	—	—	135	2	48	18	2	48	153
Church Missionary Society, Gaza	—	12	—	—	5	1	1126	25	1	1126	42
Kupat Cholim (Beilinson), Petah Tiqva	—	—	—	—	—	3480	1	15	3480	1	15
Jewish Community, Haifa	8	—	938	—	7	851	1	2	1797	1	9
Italian, Haifa	—	6	—	2	48	96	199	177	96	201	231
German, Haifa	1	4	37	23	120	51	314	197	89	337	321
Edinburgh Medical Mission, Nazareth	—	13	—	69	42	—	1067	160	—	1136	215
French, Nazareth	—	—	—	—	—	—	663	282	—	663	282
Kupat Cholim, Affula	—	3	—	—	—	1901	3	—	1901	3	3
United Free Church of Scotland, Tiberias	1	16	2	101	14	123	513	78	126	614	108
Schweitzer, Tiberias	5	2	153	—	—	970	7	—	1128	7	2
Hadassah, Safad	1	—	70	—	—	52	—	—	123	—	—
Church Missionary Society, Nablus	—	—	—	—	—	—	572	61	—	572	61
Total Voluntary Hospitals	52	125	4007	236	844	14680	9243	3677	18739	9479	4646
Government, Jerusalem	2	321	23	39	23	146	1751	733	171	1790	1077
Government, Beersheba	—	—	—	—	—	1	207	4	1	207	4
Government, Jaffa	—	113	1	137	39	4	2061	328	5	2198	480
Government Bnei Beraq	—	3	343	—	5	150	—	—	493	—	8
Government, Gaza	—	6	—	—	—	—	505	18	—	505	24
Government, Haifa	2	343	378	33	59	129	1736	495	509	1769	897
Government, Nablus	—	20	—	—	—	—	2223	30	—	2223	50
Government, Safad	—	120	1	3	5	89	481	39	90	484	164
Government, Mental, Bethlehem	—	—	—	—	—	3	2	3	3	2	3
Government Casualty Post, Ramle	—	4	—	2	—	5	145	1	5	147	5
Municipal, Tel Aviv	—	32	4314	—	1	3021	7	2	7335	7	35
Total Government and Municipal Hospitals	4	962	5060	214	132	3548	9118	1653	8612	9332	2747
TOTAL ALL HOSPITALS	56	1087	9067	450	976	18228	18361	5330	27351	18811	7393

GOVERNMENT AND MUNICIPAL HOSPITALS, 1938.

GENERAL AND INFECTIOUS.

Location of Haspital	Nominal Bed-Strength				Admissions					Deaths	Discharges	Daily Average in Hospital
	General	Isolation	British	Maternity	Moslems	Christians	Jews	Other Religions	Total			
Jerusalem, Government	73	11	16	16	1790	1074	171	3	3038	134	2897	90.8
Haifa, Government	88	76	30	26	1769	853	509	44	3175	188	3028	133.5
Jaffa, Government	67	73	7	3	2198	480	5	—	2683	173	2515	91.0
Nablus, Government	59	19	4	3	2223	49	—	1	2273	171	2117	97.6
Safad, Government	—	28	—	—	484	163	90	1	738	39	703	24.5
Beersheba, Government	8	—	—	—	207	4	1	—	212	27	190	8.7
Gaza, Government	24	4	2	2	505	23	—	1	529	42	482	17.6
Bnei Beraq, Government	—	36	—	—	—	8	493	—	501	27	484	17.3
Tel Aviv, Municipal	211	—	—	23	7	35	7335	—	7377	485	6873	290.5
TOTALS	530	247	59	73	9183	2689	8604	50	20526	1286	19289	771.5

PRISON SICK DETENTION WARDS, 1938.

Jerusalem	12	354	20	60	—	434	—	437	9.8
Acre General Ward	26	697	18	50	14	779	—	770	22 3
Acre Tuberculosis Ward	20	17	—	2	—	19	—	22	15.5
Acre Criminal Lunatic Ward	14	3	—	4	—	7	—	4	25.2
TOTALS	72	1071	38	116	14	1239	—	1233	72.8

VOLUNTARY DISPENSARY AND CLINICS, 1938.

Name of Dispensary or Clinic	Total Attendances	New Patients							
			By Diseases			By Religions			
		Totals	Malaria	Eye Diseases	Other Diseases	Moslems	Christians	Jews	Unclassified and other religions
JERUSALEM.									
Shaare Zedek Hospital	32494	4900	—	—	4900	43	20	4837	—
Misgab Ladach Hospital	5672	4648	—	1682	2966	18	11	4619	—
French (St. Louis) Hospital	30693	14398	—	5736	8662	6632	5918	1848	—
Ophthalmic Hospital of the Order of St. John	79019	14115	—	14115	—	10584	3191	340	—
Hadassah (Rothschild) Hospital	95932	15198	—	2754	12444	17	39	15142	—
British Mission to Jews	27477	13110	1	1244	11865	89	386	12635	—
Armenian Convent Dispensary	809	421	—	5	416	—	421	—	—
Italian Hospital	6173	1420	—	—	1420	554	522	344	—
New Bicur Cholim Hospital	8526	2265	—	—	2265	—	—	2265	—
Old Bicur Cholim Hospital	1066	1066	—	—	1066	—	—	1066	—
German Hospital	13520	8201	—	—	8201	3583	2458	2160	—
Kupat Cholim Dispensary	216286	85336	—	4713	80623	—	—	85336	—
Moslem Polyclinic	9447	8587	—	—	8587	8419	168	—	—
HEBRON.									
St. Luke's Hospital	9094	2729	31	308	2390	2715	14	—	—
Moslem Polyclinic	2630	2497	—	19	2478	2497	—	—	—
RAMALLAH.									
Soeurs de St. Joseph Dispensary	8999	8616	—	7235	1381	4496	4120	—	—
BETHLEHEM.									
French Hospital	22278	1823	—	252	1571	1098	725	—	—
JAFFA.									
Church of Scotland Dispensary	1910	1135	—	—	1135	30	40	1064	1
Church Missionary Society Hospital	5737	2453	185	32	2236	2013	435	5	—
French Hospital	30111	3850	4	1062	2784	3850	—	—	—
St. George's Dispensary	3374	2262	—	21	2241	617	1645	—	—
Agudat Yisrael Clinic	1036	689	—	72	617	343	—	346	—
Jewish Medical Association, A Clinic	25626	9245	—	780	8465	—	—	9245	—
Jewish Medical Association, B Clinic	14321	5554	—	974	4580	8	—	5546	—
Kupat Cholim Dispensary	1028073	240043	62	31711	208270	—	—	240043	—
GAZA.									
Church Missionary Society Hospital	7498	4833	292	102	4439	4573	257	2	1
HAIFA.									
German Hospital	11829	5237	—	1531	3706	2797	2294	146	—
Jewish Community Hospital	34683	9321	—	1350	7971	25	6	9290	—
Italian Hospital	6936	2912	128	3	2781	1352	753	767	40
British Jews Society Clinic	13251	2272	21	148	2103	645	474	1153	—
Kupat Cholim Dispensary	373786	169363	—	18734	150629	587	589	168187	—
Moslem Polyclinic	8146	3513	466	202	2845	3400	110	3	—
French Dispensary	16583	2897	274	319	2304	2126	711	12	48
NAZARETH.									
Edinburgh Medical Mission Hospital	14471	9410	—	1274	8136	6019	3391	—	—
Austrian Dispensary	5340	3685	111	312	3262	1665	2006	14	—
French Hospital	12787	11278	609	1120	9549	8552	2726	—	—
NABLUS.									
Church Missionary Society Hospital	9876	4234	120	521	3593	4234	—	—	—
TIBERIAS.									
Scots Mission Hospital	9863	2798	249	80	2469	2102	279	402	15
Hadassah Dispensary	27418	3343	—	1787	1556	135	—	3208	—
SAFAD.									
Hadassah Hospital	13572	1876	3	54	1819	—	—	1876	—
TOTALS	2246342	691533	2556	100252	588725	85818	33709	571901	105

57.—(a) British Patients—Visits and Consultations.

Hospital Surgery and Medical Care of British Community by the Specialist.

11.170 visits and consultations are recorded in the year 1938, in clinics homes and hospitals. The heaviest months were March and December, with October and November slightly less. The latter months of the year showed a greater increase in British Police, both as inpatients and outpatients, due to the recent additions to the Force.

There were no epidemics in the year, but a large increase in casualties, both in Police and Army. Up till the end of the year, all serious cases from the Army were admitted, as the Casualty Clearing Station in Jerusalem was not opened till December, and then only for the lighter cases, till their theatre was completed. 29 Army and 7 R.A.F. cases were admitted.

20 births in British cases occurred; 14 boys, 6 girls.

(b) British Section (Bute House), Government Hospital, Jerusalem.

322 admissions as follows:—

Police (British)	163
Government Officials	18
Army	29
R.A.F.	7
Other Males	8
Women and children	97

(7 Government officials, 21 children).

Of the above, 7 were visitors to the country.

The British Section had been extended during the year, by including all the three floors of the building with the addition of a lift. This was carried out during the summer and by mid-November, the building was taken over, the lower floor being used as a temporary fever section till the Fever Hospital is completed. 50 beds were available as against a crowded 20 on the top floor. This will be reduced later, on the completion of the Fever Hospital, to about 36. A demand for beds for the married families of the Army was anticipated on their arrival at the end of the year and all was in readiness for them, but fortunately less sickness has occurred than expected. It is possible now to have male and female patients on separate floors, and the accommodation for maternity cases has been increased; with the greater number of British Police and Army wives, greater facilities are now available. The lift has been a great help for transport of patients and the distribution of meals from the ground floor.

134 conditions are noted among those admitted; the principal ones were: Appendicitis 12, bullet wounds 16, deliveries 20, diarrhoea 17, dysentery 6, fractures 16, gastric 10, hernia 7, malaria 7, sandfly fever 10, synovitis knee 7, tonsillitis 25, other ear, nose and throat cases 13. Actual casualties (i.e. wounds caused by others) amounted to 17, but there were many accidents of varying severity.

14 deaths occurred, 9 of which were brought in dead, all being casualties in the Army and Police. Of the remaining five, two died of wounds, one from a fractured base, one from double pneumonia and one from angina pectoris, the latter being a visitor.

Operations on British patients numbered 100; the most numerous were in relation to wounds 24, appendicitis 11, hernia 7, ear, nose and throat 14.

In August, Dr. Turner, Assistant Specialist, arrived and carried on during the absence of the Specialist on leave; his particular branch of ear, nose and throat conditions allow a scope for activity along lines which should be of special benefit to the many who have disabilities in this respect.

(c) Surgery in the Jerusalem Hospital.

1452 operations are noted, 582 being major. There was a distinct increase in gunshot wounds of all types, and many were for compound fractures, amputations, laparatomies for punctured and torn bowel, as well as removal of foreign bodies. The subjoined list in (f) gives some of the more important. As in previous years, the Medical Officer in charge of the hospital undertakes the responsibility in the main hospital.

(d) District and other Hospitals.

Fewer visits outside Jerusalem have occurred in the year, mainly on account of the restricted road conditions. 107 visits are recorded, those outside being: Jaffa 16, Haifa 1, Nablus 1, Bethlehem 2, Sarafand 1, the remainder being to other hospitals in Jerusalem.

(e) Hospital Amenities.

Mention has been made of the increase in Bute House extension, which was brought into use in November. When the Fever Hospital is available, Bute House will be more or less self-contained for British patients, except for major operations, which will still be carried out in the main hospital. The separation of clinic cases, particularly among British Police, which have increased in number as a natural result of the increase in the Force, makes for less delay and congestion in dealing with them.

X-Ray work continues as copiously as before, many poor cases being referred from outside; the old set still stands up to the work, though lacking in many of the facilities of a more modern apparatus.

(f) Major Operations in the Jerusalem Hospital.

The following are some of the more important:—

Amputations	13
Appendicectomies	52
Arthrotomies	6
Bone Plating and wiring	1
Compound Fractures (Debridement and fixation)	32
Enterorrhaphy	10
Fracture of skull (Debridemeny)	11
Foreign Bodies (Removal)	30
Gastro-Enterostomy	2
Gastrorrhaphy	4
Herniotomy	45
Hydrated Cyst (Liver)	2
Hydrocele	2
Laparatomy (Exploratory)	10
Mastoidectomy	4
Mastectomy (Cancer)	1
Nephrectomy	2
Nephrolithotomy	1
Nerve Suture	1
Orchidectomy	3
Osteotomy	10
Prostatectomy	2
Phrenicectomy	3
Rectal Prolapse (Whitehead)	2
Recestion Nasal Septum	1
Rib Resection	5
Skin Grafting	3
Suprapubic Lithotomy	10
Tonsillectomy	23
Tracheotomy	3
Tumours and Cysts	10
Uretero-Lithotomy	1
Urethrotomy	2

Obstetrical and Gynaecological
as follows:—

Accouchement Forcé	1
Caesarean Section	5
Craniotomy	5
Curettage	96
Forceps	26
Hysterectomy	1
Hysteropexy	2
Oophorectomy	3
Versions	13
	152

Medical care of British Community of Haifa and District by Senior Medical Officer, Railways.

58. The Senior Medical Officer, Railways, has been in charge of the British Section of the Government Hospital, Haifa, and has had the care of the British Official Community of Haifa and District throughout the year under review.

The main event has been the transfer to the new hospital where accommodation for British has been provided on a present basis of 30 beds with the possibility of extending if an increase in Army families should necessitate it. The new accommodation is in general excellent and will result in better service to the community which it is designed to serve than was possible under the old conditions. There are two main criticisms as regards the structure of the building. One is of noise, many patients complaining of the echoing noise that comes from furniture being moved or any thing being dropped in the floor above.

The other criticism is of glare which results from one side of the room being entirely of glass. This will have to be remedied by providing a suitable folding screen in keeping with the room decorations that can be kept between the patient and the balcony if required.

As regards Nursing Staff, at the time of writing, there are five British Nursing Sisters detailed for duties in the Section. Three other British Sisters have special duties in other sections of the hospital viz., Acting Assistant Matron, Theatre and Out-Patients Sister, and Sister in charge of Isolation Section. A Sister in charge of the X-Ray and Physio-Therapy Section is about to be appointed.

The maternity work in the British Section is likely to become a major feature in the course of the next year or so owing to the greater number of married British Police and also the increasing number of Army families. The maternity work is already increasing and it is proposed to detail one of the five Sisters to take charge of this under the direction of the S.M.O., Railways. With the Section at its present size five British Sisters should be reckoned the minimum establishment for proper working, and if in the future it is fully extended a further Sister will be required. To assist the Sisters there are two Palestinian Staff/Nurses, one of whom goes on night duty, and one Probationer Nurse and one Male Attendant.

In October the Army opened a 400 bedded hospital in the Acre Bay and since the end of October we have not dealt with any more army cases apart from families and cases of infectious disease.

There has been a very large increase in the number of British Police in the district and they formed the bulk of the admissions to the Section. The general health has been surprisingly good. The main features as compared with other years have been the increase in cases of Malaria (31), about half of which received their primary infection in Jenin, and the low incidence of Sand Fly Fever (11) and Enteric Fever (2). The incidence of Sand Fly Fever amongst the troops billeted in the Peninsular Barracks, adjoining the new Government Hospital was high, and is perhaps explained by the building operations. Certainly sand flies and mosquitoes were found to be a far greater pest at the new hospital than they ever were at the old hospital, and it is likely that a number of patients may contract Sand Fly Fever in the coming summer while in the hospital for other reasons.

Admissions of British subjects to the hospital numbered 345, this being an increase of 53 on 1937 and of 94 on 1936.

This number was contributed from the following categories :—

British Police	216
Army	65
Women and Children	49
Non-Government men	9
Government Officials	5
Navy	1
Total	345

The following major surgical operations were performed :—

Appendicectomy	13
Various Gun-Shot Wounds (Debridement & Suture)	5
Laparotomy for Gun-Shot Wounds of Abdomen	4
Compound Fracture Tibia, Debridement and Pin Extension	3
Compound Fracture Humerus, Debridement and Pin Extension	1
Currettage and Cauterisation of Uterine Cervix	4
Nephrotomy for Pyelo-Nephritis	3
Therapeutic Abortion	1
Evacuation of Uterus, for Incomplete abortion	1
Cholecystectomy	1
Repair of Ruptured Urethra	1
Drainage of Liver Abscess	1
Arthrotomy for loose Cartilage of Knee-Joint	1
Amputation through thigh, following G.S.W.	1
Radical Cure of Inguinal Hernia	1
For Dupuytrens Contracture of Hand	1
Tonsillectomy and Currettage of Adenoids	2
Total	45

There were fourteen deaths in the British Section during the year. Causes of death were as follows :—

Gun-Shot Wounds of Abdomen	4
Fractured Skull & Laceration of Brain	2
Gun-Shot Wound of Leg and Haemorrhage	1
Pulmonary Tuberculosis	1
Tubercular Peritonitis	1
Cerebral New Growth	1
Liver Abscess	1
Pneumonia and Empyaema	1
Toxic Enteritis of Infancy	1
Still Birth (Breech Presentation)	1
Total	14

Approximately 2100 consultations were held in the British Section clinic or at the houses of patients.

Visits were paid, on special request, to the Central Prison, Acre ; the Government Hospital, Safad ; the Scots Hospital, Nazareth ; the Hadassa Hospital, Haifa ; the Galilee Hospital, Tiberias ; the Hadera Hospital.

The Senior Medical Officer, Railways, has continued to cooperate with the Medical Officer in charge, in the general work of the hospital and in particular in the surgical work, and the standard of work has continued to rise.

The fine new hospital buildings and better technical equipment together with a more complete team of Medical Officers has given a stimulus to fuller investigation of cases and, therefore, more accurate diagnosis and more competent treatment.

Matters of particular importance in this respect have been the incorporation of the Pathological Laboratories in the hospital buildings, and also the services of a radiological expert regularly every week. Pathological investigations are still hampered by the lack of full facilities for bio-chemical analysis. The present method of sending samples of blood etc. to Jerusalem for bio-chemical analysis is probably a waste of time for all concerned, as the accuracy of results must always be a matter of doubt .

The one clinical assistant is overworked and it would make for greater efficiency if a hospital of this size and importance could have two resident clinical assistants, to allow of proper opportunities for relief and recreation.

The regular Medical Officers of the hospital now form a very efficient team, but the need for specialist service is not lessened thereby but rather increased, and there have been many occasions when the services of certain private specialists were obtained in specially difficult or unusual cases.

Radiology.

The opening up of the new X-Ray Section at the Haifa Hospital supplied the Department with an up to date installation purchased from Messrs. Phillips and Co. The radiologist visits Haifa two days a week and will be assisted by a qualified English woman radiographer.

The therapy section at Haifa Hospital will not be opened up at present owing to lack of funds for the purchase of the necessary equipment.

A portable X-Ray set will be provided for Safad Hospital.

The following is a summary of radiological work carried out :—

	Number of Cases Dealt With	Number of Radiographs Taken
Jerusalem	**2,210**	**4,556**
Haifa	**1,637**	**2,812**
Jaffa	**764**	**1,450**
Nablus	**245**	**438**

Voluntary Hospitals and Dispensaries.

60. The voluntary hospitals and dispensaries continued to provide a large proportion of the total medical aid for the population of Palestine, thereby relieving the Government of the necessity of making hospital and outpatient provision for all.

The Department provides 909 beds of which 247 are for infectious cases, and its hospitals and clinics are open to all communities. A large proportion of its cases are Government officers, police, prisoners, medico-legal cases and the very poor, and, as far as possible, all infectious cases.

The voluntary hospitals on the other hand provide :—

(*a*) for Arabs who can pay a small fee;

(*b*) for the majority of Jewish cases except infectious cases.

Under category (a) the principal voluntary hospitals are :—

The C.M.S. hospitals of Jaffa, Gaza, and Nablus providing 163 beds.

The Scottish Hospital at Tiberias of 60 beds which meets the requirements of both Arab and Jew in this large area including Safad and part of Transjordan.

The Edinburgh Medical Mission Hospital at Nazareth of 70 beds.

The French hospitals at Jerusalem, Bethlehem and Nazareth with total accommodation for 376, which, however, are not usually more than half filled.

The St. Luke's Hospital, Hebron, 32 beds, which adequately meets the hospital requirements of the population of this district and at the same time conducts valuable village clinics.

The Italian hospitals at Haifa and Jerusalem which deal chiefly with surgery, and the German Hospital of 80 beds at Jerusalem and its small branch at Haifa which carry out very useful work.

The private surgical hospital of Dr. Dejani at Jaffa which provides very good service under category (a) and is well patronized.

The Kupat Cholim, Sick Fund of the Jewish Federation of Labour, numbering some 76272 members and their families conducts a Hospital of 72 beds at Afule in the Emek, and the Beilinson Hospital of 66 beds near Petah Tiqva, a convalescent home at Motza and a large number of central, district and colony clinics and 12 dental clinics and 4 X-Ray laboratories.

Jews other than subscribers to the Sick Fund are admitted to these hospitals on payment.

The Hadassah Medical Organization provides a hospital service of 190 beds in Jerusalem and a large poly-clinic, school or nursing, a tuberculosis hospital at Safad of 58 beds and a school medical and anti-trachoma service and infant welfare and health centres.

The new University Hadassah Hospital on Mount Scopus was nearly completed during the year. It will accommodate the Hadassah Medical Organization Offices, 300 patients, and will provide a nurses home. Outpatients will continue to be held in the old premises.

The new hospital is built in modern style and is up to date in every respect and will be a great improvement on the old Hadassah Hospital premises. It is capable of future expansion to some 500 beds and all its services will be based on that bedstrength.

The Government subscribed £P.6,000 towards the radiological section of the hospital which promises to be equipped on the best lines.

The Shaare Zedek, Bicur Cholim and Misgab Ladach Hospitals assisted in providing for the needs of the Jewish sick in the Jerusalem area.

The Jewish Community Hospital at Haifa dealt chiefly with medical cases and was invariably full.

At Tel-Aviv several private hospitals of which the Assuta is the largest and best equipped carried out valuable work.

At Haifa Dr. Better's Maternity Hospital, Dr. Bodenheimer's Convalescent Home, and several small hospitals assisted in the provision of medical aid.

The outpatient clinics of the Jewish Hospitals are particularly well attended and provide an efficient service for that community, whether in towns or in settlements.

HOSPITAL NURSING STAFFS, 1938.

	Bed-Strength	Matrons and British Sisters	Staff Nurses	Nurses under Training			Number not under Training	Total
				1st Year	2nd Year	3rd Year		
GOVERNMENT AND MUNICIPAL HOSPITALS Including Mental Hospital and Ramleh Casualty Post	1075	25	96	37	26	17	143	344
VOLUNTARY HOSPITAL ORGANIZATIONS.								
Hadassah Medical Organization	248	2	49	16	22	23	9	121
Jewish Federation of Labour (Kupat Cholim)	222	1	23	16	14	18	20	92
Church Missionary Society	165	4	8	6	6	6	1	31
The Order of St. John of Jerusalem	45	3	—	—	—	—	2	5
Tutors and Protectors of the Jewish Community in the Holy Land, Amsterdam	53	1	3	—	9	8	1	22
Misgab Ladach	34	1	2	2	—	1	—	6
Bicur Cholim Society	140	3	22	5	—	—	6	36
Italian Hospital, Jerusalem	60	1	19	—	—	—	—	20
British Mission to Jews	70	5	—	2	1	1	—	9
International Moravian Society London (Leper Hospital)	60	1	4	—	—	—	—	5
German (Deaconesses) Hospital, Jerusalem	80	1	8	6	4	3	5	27
German Temple Society, Jaffa	20	1	2	—	—	—	—	4
Jerusalem and the East Mission	32	1	2	—	5	1	1	10
Italian Association, Haifa	50	1	14	—	—	—	—	15
St. Charles Congregation, Haifa	40	1	7	—	—	—	4	12
Edinburgh Medical Mission Society	72	3	1	3	2	2	4	15
United Free Church of Scotland	70	4	3	3	3	3	—	16
Ezrath Nashim Home for Insane and Incurables	60	1	—	—	—	—	15	16
French Hospitals	396	5	30	4	4	8	15	66
Jewish Community, Haifa	53	1	16	—	—	—	—	17
Jewish Community, Tiberias	30	1	4	—	—	—	6	11
TOTALS	3075	67	313	100	96	91	232	900

VOLUNTARY VILLAGE CLINICS, 1938.

Organization	No. of Clinics held	Total attendances	NEW CASES							
			Totals	Malaria	Eye Diseases	Other Diseases	Moslems	Christians	Jews	Others
Jewish Federation of Labour	14945	510436	210103	854	7696	201553	1045	125	208933	—
Rural sick Benefit Fund	7338	112869	36344	433	1701	34210	926	38	35380	—
Jewith Federation of Labour and Rural Sick Benefit Fund Combined	1499	60390	19969	109	539	19321	64	—	19905	—
Committees of Settlements	722	9512	4404	6	140	4258	43	7	4354	—
Church Missionary Society	345	19655	6155	345	2419	3391	5538	617	—	—
Jerusalem & The East Mission	89	1621	893	26	226	641	892	1	—	—
TOTALS	24938	714483	277868	1773	12721	263374	8508	788	268572	—

Training of Nurses.

61. The number of nurses under training in general nursing at recognized training schools was 287, of whom 100 were in the 1st year of the course, 96 in the second year, and 91 in the third and final year of instruction.

The number of candidates presenting themselves for the examinations which are held twice yearly continues to increase. During 1938 the number was 202.

The following table gives particulars of the successful candidates from the various institutions recognised as training schools :—

NURSES EXAMINATIONS — 1938.

Names of Hospitals	First Year	Second Year	Third Year
Government and Municipal Hospitals	23	15	14
Church Missionary Society	6	3	3
Hadassah Medical Organization	22	23	13
British Mission to Jews	1	1	1
Jerusalem and The East Mission	4	1	1
Edinburgh Medical Mission Society	2	3	—
Church of Scotland	2	3	1
Jewish Federation of Labour	15	18	—
Shaare Zedek	9	8	—
TOTALS	84	75	33

The number of women who have been trained locally in general nursing and have received the Graduate Nurse's Certificate since 1920 now amounts to 496.

2 Government nurses attended the Ophthalmic Hospital of the Order of St. John in Jerusalem for special training in ophthalmic nursing.

Maternity Services and Training in Midwifery.

62. The course of training prescribed under the Midwives Ordinance is six months.

7 Graduate Nurses and 10 Pupil Midwives qualified for licences to practice midwifery at the Government Midwifery Training School in Jerusalem and 3 qualified at the Training School of the Hadassah Medical Organization.

There are 532 qualified midwives licenced to practice under the Ordinance. In thirty-eight municipal and local council areas prescribed by order under the Ordinance only qualified persons may be added to the list of persons permitted to practice.

Practice by unqualified persons is permitted in other areas subject to registration and an annual permit which may be withdrawn at the discretion of the Department. There are 1198 unqualified dayas holding annually renewable permits to practise, the majority of whom work in village and rural areas.

In Jerusalem, Jaffa, Haifa, Nablus, Gaza and Hebron, the work of practising midvives is under the general supervision of British Superintendents of Midwifery.

Unqualified dayas are inspected at least twice a year as regards their equipment and general fitness to attend upon women in labour.

Midwifery cases delivered in Government Hospitals again show increase. In the Princess Mary Maternity Wards of Jerusalem Government Hospital (16 beds), there were 684 admissions resulting in 566 live births. The number of dead births was 38, and there were 6 deaths of mothers.

In the British Section of the Government Hospital Jerusalem, there were 20 maternity cases admitted resulting in 20 live births. In the Government Hospital, Haifa, there were 260 cases admitted to the Maternity Section and in Nablus, Jaffa and Gaza Hospitals 109 deliveries were dealt with.

Infant Welfare Services.

63. The Department maintans 33 Infant Welfare Centres in towns and villages and participates in the administration and support of two other Centres. The Government also contributes a sum of £P.1771 annually towards the maintenance of the Infant Welfare Centres administered by the various Jewish medical organizations. New village centres were opened by the Department at Beit Hanina, Khan Yunis and Rama, while the maintenance of the two Haifa Centres is now wholly undertaken by the Department.

There are 49 Infant Welfare Centres maintained for Jewish children: 6 by the Tel Aviv Municipal Council, 17 by the Hadassah Medical Organization, 17 by the Sick Fund of the Jewish Federation of Labour, and 9 by the Women's International Zionist Organization. There are four Centres maintained by local voluntary committees: three for Arab infants and one for Jews.

The total number of Centres in Palestine is 88 with over 18,000 infants receiving attention of whom 10,300 approximately are of the Jewish community and 7,700 Arab. Jewish births are about 10,000 annually, while the number in the remainder of the population is about 45,000. These figures indicate that the service by voluntary and assisted organizations is very comprehensive in the Jewish community while there is a very wide field for development of such services in the Arab community.

INFANT WELFARE, 1938.

Location and Supporting Organization	No. of Children Registered at end of Year	Attendances of Infants at Centre	Visits by Nurses to Infants at Home	Opened in
Jerusalem, Government	504	27578	7139	1925
Nablus, Government	222	8664	1873	1926
Acre, Government	631	19823	6485	1926
Gaza, Government	241	5827	2830	1926
Ramleh, Government	279	7500	3582	1927
Hebron, Government	652	24013	6185	1927
Beit Mahsir, Government	125	19341	2679	1936
Jericho, Government	118	12066	2543	1933
Ramallah, Government	184	6112	2152	1925
El Taybeh, Government	159	8138	3626	1935
Jifna, Government	168	11769	2598	1928
Bethlehem, Government	215	10221	2981	1926
Beit Sahur, Government	161	14165	2485	1934
Dura, Government	123	3770	1944	1934
Tarqumia, Government	111	5417	2722	1936
Beit Jibrin, Government	120	3696	2355	1935
Ajjur, Government	114	3192	2444	1936
Beersheba, Government	—	301	—	1929
Jaffa, Government	366	11241	2216	1930
Majdal, Government	269	5789	2627	1933
Kabri, Government	—	1738	1545	1934
Jenin, Government	140	7581	3099	1932
Tulkarem, Government	451	12105	3966	1933
Beisan, Government	207	16951	3147	1930
Kfar Kama, Government	32	2065	1087	1936
Safad, Government	279	17282	10043	1934
Beit Rima, Government	99	4573	1595	1937
Tarshiha, Government	121	2220	1781	1937
Beit Hanina, Government	69	5971	650	1.6.38
Khan Yunes, Government	170	3693	1457	1.2.38
Rama, Government	45	751	1857	1.1.38
Haifa East, Government	454	6530	5071	Transferred from Local Committees on 1.1.38.
Haifa West, Government	241	3015	2786	
Tel Aviv A, Municipal	985	17141	2847	1927
Tel Aviv B, Municipal	601	11598	1621	1935
Tel Aviv C, Municipal	657	9764	2943	1937
Tel Aviv D, Municipal	495	10685	1510	1935
Tel Aviv E, Municipal	748	13884	2033	1935
Tel Aviv F, Municipal	1066	15529	3502	1935
	11622	371699	114006	
HADASSAH MEDICAL ORGANIZATION.				
Jerusalem Station A	68	2449	644	1922
Jerusalem Station B	466	10283	1802	1924
Jerusalem Station C	524	11073	2827	1923
Jerusalem Station F	425	8916	2161	1925
Jerusalem Station G	421	9087	3115	1928
Jerusalem Station H	36	773	197	1937
Petah Tiqva	126	4305	439	1924
Mahne Yehuda	66	2104	1220	1925
Shaarayim	74	2050	640	1936
Rehovot	31	1210	111	1925
Carried Forward	2237	52250	13156	

Location and Supporting Organization	No. of Children Registered at end of Year	Attendances of Infants at Centre	Visits by Nurses to Infants at Home	Opened in
Brought Forward	2237	52250	13156	
Haifa Station B	112	4346	588	1926
Haifa Station C	130	4124	553	1926
Tiberias	163	2886	1145	1924
Safad	37	422	209	1936
Yavniel	41	414	87	1935
Kiryat Motzkin	46	1449	59	Transfer. from Local Committees on 1.1.38
Bnei Beraq	103	2688	242	1.4.38
	2869	68579	16039	
JEWISH FEDERATION OF LABOUR.				
Ramat Gan	112	2919	275	1935
Shekhunat Borokhov	73	1529	166	1935
Raanana	110	1539	258	1935
Rehovot	108	1869	253	1935
Kfar Malal	22	352	67	1935
Kfar Saba	165	3094	260	1931
Hertzelia	75	1733	213	1935
Bnei Beraq	—	426	59	1937
Haifa (Hadar Hacarmel)	878	12786	1134	1935
Kiryat Haim	206	2868	176	1935
Pardess Hana	171	794	91	1935
Karkur	55	984	39	1935
Hadera	109	2191	157	1935
Petah Tiqva	96	1786	304	1936
Ness Tsiyona	43	556	54	1937
Binyamina	—	57	24	1937 Transferred to Wizo on 1.3.38
Kfar Shmaryahu	42	92	50	1.9.38
	2265	35575	3580	
WOMEN'S INTERNATIONAL ZIONIST ORGANIZATION				
Rishon le Tsiyon (Administered by Hadassah) A	120	3970	1144	1928
Rishon le Tsiyon (Administered by Hadassah) B	15	82	50	1.11.38
Haifa Station A (Administered by Hadassah)	309	9484	411	1923
Haifa Station D (Administered by Hadassah)	28	784	39	1923
Nes Tsiyona (Administered by Hadassah)	6	130	39	1937
Ahuza	28	741	42	1937
Binyamina	29	406	111	Transferred from J. F. L. on 1.3.38
Hadera (Administered by Hadassah)	54	1350	306	1.1.38
Nahliel (Administered by Hadassah)	48	815	418	1.1.38
	637	17762	2560	
LOCAL COMMITTEES.				
Jerusalem, American Colony Aid Association	405	11739	2906	1927
Jaffa, Committee of Ladies	287	10138	3086	1926
Ain Karem	74	9859	1670	1937
Affula (Administered by Hadassah)	41	1304	381	1.1.38
	807	33040	8043	
GRAND TOTALS	18200	526655	144228	

Gynaecological Services.

64. The gynaecological Clinics conducted by women doctors and primarily designed to provide treatment for Moslem women were subject to some interruptions on account of civil disturbances which necessitated suspension of travelling between towns by the doctors. There were, however, approximately 17,000 total attendances for treatment at these clinics, of whom 1628 were new patients. 1315 of the new cases were Moslem women who but for the opportunity of receiving treatment by women doctors would probably have continued without medical attention. The gynaecological clinics are established at Jerusalem, Jaffa, Ramallah, Nablus, Haifa and Acre.

At these centres the women doctors deal wth ante-natal cases and the treatment of sick and weakly infants attending the local Infant Welfare Centres. In association with the gynaecological clinics facilities for treatment of venereal disease in women are provided.

Lunacy.

65. No change occurred in the provision for the institutional care and treatment of cases of mental disease. The Government hospitals in Bethlehem have a total accommodation for 157 patients and were full to capacity throughout the year. So also was the Ezrath Nashim Home which admits patients on a paying basis to the number of 60.

The Department has a waiting list for admission of 262 dangerous lunatics. Seven vacancies occurred in the Government hospitals and were filled immediately by the most urgent cases on the waiting list. Applications and petitions continue to be received from relatives and friends for admission of patients for whom there are no vacancies. The enforced presence of these lunatics in the home results in the disorganization of all family and social life.

Several unrecognized private and charitable homes for the care of mental patients exist and an endeavour has been made during the past year to improve the conditions under which these homes operate.

Three deaths occurred during the year in Government hospitals. Four patients were discharged from Government hospitals of whom one was cured and 3 not improved. From the Ezrath Nashim Home 11 were discharged cured, 14 improved and 7 not improved.

The following is the position as regards patients in hospital or awaiting admission at the end of the year.

	Arabs	Jews	Total
In Government Hospitals	73	83	156
In Ezrath Nashim	—	61	61
Awaiting Admission	139	123	262

The following table gives the classification of cases admitted by type of insanity.

	1938	
	Government	Ezrath Nashim
Dementia Praecox	3	21
Paranoia	—	4
Amentia	—	1
Mania Acute	1	—
Mania Recurrent	—	2
Mania Chronic	—	1
General Paralysis Insanity	—	2
Imbecility	—	1
Depressive Insanity	2	—
Climacteric	1	—
	7	32

ADMISSIONS, ETC., MENTAL HOSPITALS, 1938.

HOSPITAL	Nominal Bed Strength	ADMISSIONS				Deaths	Discharges	Daily Average in Hospital
		Moslems	Christ.	Jews	Totals			
Government Mental Hospital No. 1	105	—	3	2	5	2	1	104.7
Government Mental Hospital No. 2	52	2	—	—	2	1	3	51.0
TOTALS	157	2	3	2	7	3	4	155.7
Ezrath Nashim Home	60	—	—	32	32	—	32	62.6
GRAND TOTALS	217	2	3	34	39	3	36	218.3

MENTAL HOSPITAL RETURNS, 1938.

General Statistical Table.

Institution	Sex	Number of Patients Admitted during the year	Daily average number of Patients resident during the Year	No. of Attendants				Discharges			Number of patients who died during the year	Average duration of residence of those who during the year			Number of patients in residence (i.e. on the books of the Institution) on 13-12-38
				Resident		Non-Resident									
				Employed in Attendance on the patients	Employed as Servants or only partially as Attendants	Employed in Attendance on the patients	Employed as Servants or only partially as Attendants	Cured	Relieved	Not improved		Died	Were discharged	Remained at the end of the year	
												Days	Days	Days	
Government Mental Hospital Bethlehem No. 1	Males	1	30.0	12	4	—	5	—	—	—	—	—	—	2714.0	30
	Females	4	74.7	19	5	—	8	—	—	1	2	1906	178.0	2759.0	75
Government Mental Hospital Bethlehem No. 2	Males	2	51.0	12	1	—	8	1	—	2	1	2606	485.0	1873.0	51
	Females	—	—	—	1	—	4	—	—	—	—	—	—	—	—
Ezrath Nashim Home Jerusalem	Males	10	22.2	3	—	2	1	3	5	1	—	—	73.9	1761.0	22
	Females	22	40.4	4	—	7	2	8	9	6	—	—	250.2	1732.7	39
TOTALS		39	218.3	50	11	9	28	12	14	10	3	—	—	—	217

Government School Medical Service.

66. The work of the School Medical Service continues to expand. During 1938, there were 460 schools with a student population of 16,485 attended by the staff of the Department of Health compared with 442 schools and 53,376 pupils in 1937. The routine physical examination of pupils is carried out at three periods during scholastic life. 33,012 pupils were so examined, 19,184 in town schools and 13,828 in village schools. Of pupils examined, 36% in town schools were suffering from trachoma and in village schools 53%. There was a slight increase in the numbers of children found verminous and in those with enlarged spleen . Treatment by the school medical service staff is restricted to ophthalmic disease and malaria as a routine. Other conditions found are referred to the parents for treatment by the family practitioner or at a public hospital. In villages where medical aid is not readily available, the visiting medical officer of the Department prescribes and treats the scholars. The bulk of the treatment is for ophthalmic conditions and in this the village school teachers assist by continuing the routine treatment prescribed by the medical officer. The total attendances of children for ophthalmic treatment amounted to 2,807,639. Ninety lectures on hygiene were given to teachers. Lectures and demonstrations in mother craft are given to senior pupils of girls schools in the prinicpal towns by staff of the Department's Infant Welfare Centres.

In several centres, school premises were occupied for military purposes and the schools were required to move temporarily into other buildings in which the accommodation was generally unsatisfactory from the aspect of hygiene.

The Jewish school medical service which obtains a grant from Government equivalent to the expenditure of the Government Department on the school medical service attended to 392 schools with a student population of 51,290.

The detailed statistics of the Government school medical service are given in the table which follows :—

	Town Schools	Village Schools	Totals
LECTURES TO TEACHERS			
No. of Hygiene Lectures by Medical Officers to Teachers	53	37	90
No. of Teachers Attending Lectures	90	74	164
MEDICAL INSPECTION OF PUPILS			
No. of children Medically Examined	19184	13828	33012
No. of children with Trachoma	6866	7327	14193
No. of Children with Other Eye Disease	1674	418	2092
No. of Children with Defective Vision	474	116	590
No. of Children with Verminous Head or Body	495	328	823
No. of Children with 4 or more teeth badly decayed	257	71	328
No. of Children with Enlarged Spleen	243	546	789
No. of Children with Heart Disease	69	10	79
No. of Children with Lung Affection	30	31	61
No. of Children with Tuberculous Disease	7	2	9
No. of Children Mentally Defective	1	1	2
No. of Children Vaccinated and Revaccinated against Smallpox	351	987	1338
OPHTHALMIC TREATMENT			
No. of Attendances of Children for treatment of Trachoma etc., by Teachers or School Nurses	1088202	1719437	2807639

Railway Medical Services.

67. There has been no change in the number or disposition of the Railway Medical Staff, as compared with the previous year, and it consists of the Senior Medical Officer (Railways); the Medical Officer, Sinai Military Railway, posted at Kantara; seven Medical Orderlies, posted at Haifa Station, Qishon Workshops, Affula, Nur Esh-Shams Prison Camp, Lydda, Rafa and Kantara.

The work of the Orderlies has been good and their regular inspections and reports are the main means of controlling the sanitation of the Line and of Railway property.

Their work has during the last year been carried out under conditions of real difficulty and, sometimes, of grave personal danger and they are to be highly commended for their devotion to duty under these circumstances.

The Medical Officer, Kantara has made regular monthly inspections and reports on the line from Kantara to Lydda, Jaffa, Jerusalem and Nur Esh-Shams.

The Railway Clinic at Haifa has continued in the care of Dr. Torian. His duties have often been difficult in view of the well recognised practice of "going sick" whenever it is, for political reasons, inexpedient to put in an appearance at work.

There have been two or three organised "strikes" in the course of the year, and on each of these occasions the incidence of "sickness" has risen tremendously to recover to normal limits with the easing of political tension. The difficulty from the medical point of view is not so much with the officer or employee who comes to the clinic, as with those, mostly clerical staff, who merely absent themselves from duty and later present a private practitioner's certificate for countersignature.

The first aid equipment has been maintained as in previous years and fresh first aid boxes issued on request.

The equipment is reported on monthly and deficiencies replenished as required.

The ambulance coach was in constant use by the Army for the first nine months of the year but since the establishment of the large Military Hospital in the Acre Bay it has not been needed so much.

The coach has been equipped with electric light and has also been recently re-decorated throughout.

The chlorinating plant at the Qishon workshops has continued to give every satisfaction.

Plans for installing a similar plant at Kantara have been suspended on account of the present financial stringency, but it is questionable whether the present "rule of thumb" methods of chlorination at Kantara are effecting any real economy when the damage to the pipe distribution system from occasional over chlorination is considered.

Apart from Kantara this water is supplied to quite a number of posts on the line, as far as Rafa.

There has been considerable destruction of railway property in the course of the year, and as regards the Haifa-Rafa-Jerusalem part of the line such repairs as have taken place have been more concerned with administration needs than those of living quarters for personnel. At the same time, considerable progress has been made in Sinai.

The installation of water borne sanitation at El-Arish and Mazar is in progress and will complete this work for the main stations in Sinai.

New buildings for accommodation of personnel have been constructed at Tantoura, Tulkarm, Kafr Samir, Amman, Zerka and Mafraq.

Nearly all the offices of the Railway administrative departments in Haifa are unsatisfactory from the point of view of proper working conditions. This particularly applies to the offices of the Chief Accountant. They are hot and dusty in a summer and draughty in winter. They are overcrowded and, therefore, noisy—quite apart from street and rail noises.

The total number of attendances at the clinics of Medical Officers was 14,930 and of these 9,492 were new cases. The corresponding figures for 1937 were 15,463 and 10,572 respectively. Considering the difficulties of work and the political interference to which many Railway emploees have been subjected, these figures are a cause for satisfaction.

The total time "off-duty" granted from the clinics amounts to 23,632 days, giving an average per case of 1.5 days.

The corresponding figures for 1937 and 1936 were 1.4 days and 5.2 days respectively.

An analysis of the prevalence of sickness amongst railway employees made in terms of 1000 of the population gives the following results for 1937 and 1938 :—

		1937	1938
1.	Number of total staff furnishing the attendances at Railway Clinics—average	5000	5000
2.	Number of new cases	10,572	9,492
3.	Total number of attendances	15,463	14,930
4.	Total number of days off-duty granted	22,245	23,632
5.	Daily average per 1,000 of population new cases	5.7	5.2
6.	Daily average per 1,000 of population attending for treatment	8.4	8.1
7.	Average number of days off duty per 1,000 of population per annum	4,449	4,726

The attendances for minor ailments and injuries at the dressing stations of medical orderlies total 16,415, which compares with 22,094 in 1937.

Medical examination of men applying for service :—

Fit	Unfit	Total
71	17	88

The attendances at Medical Boards for sick-leave and compensation are still on the increase, and the total figure for 1938 is 497, which is to be compared with 447 in 1937 and 344 in 1936.

This is a definite reflection on the difficult conditions under which many of the men have to pursue their work, particularly the running staff.

In the course of the year, there have been 5 engine staff killed as the result of sabotage of the line, and about thirty injured in great or small degree. It is not surprising that practically all the survivors from these incidents have suffered from severe traumatic neurasthenia, and there has been no option for the District Medical Board but to keep them on sick-leave until the abnormal dangers of travel on the line appear to be past.

The cost of medical supplies and drugs, etc., for the year January 1st, 1938, to December 31st, 1938, amounts to the following :—

(a) Drugs and dressings	£P.121.457 mils
(b) General stores	11.185
(c) Stationery	5.161
Total	£P.137.803 mils

This figure represents a decrease of £P.23.442 mils on 1937, and is mainly accounted for by greater economy in the use of drugs and dressings by medical orderlies.

Police Medical Arrangements.

68. The British Police section was increased in the latter part of the year from an establishment of 1,100 to approximately 3,000. There were 630 admissions to hospital during the year of which 588 were treated in Government hospitals with an average of 12 days inpatient treatment per case. In 1937 the admissions were 611 with an average stay of 11 days per case. Amongst the cases treated there were 118 cases suffering from injuries of various kinds of which 3 were bomb wounds and 16 gunshot wounds, 23 fractures and 9 were cases of cerebral concussion. There were 68 cases of infectious diseases of which 50 were malaria, 6 typhoid, 5 dysentery, 2 diphtheria and one tuberculosis of the lungs. In addition, there were 23 cases of catarrhal jaundice, 31 cases of diarrhoea and gastroenteritis.

There were nine deaths in hospital, four from wounds or injuries, three from tuberculous infections, one from liver abscess and one from pneumonia.

Having regard to the strenuous conditions of service the health of the force was well maintained.

From the Palestine section of the force under regular enlistment, there were 575 admissions to hospital with an average of 8 days stay in hospital. The corresponding figures for 1937 were 502 admissions with an average of 7 days in hospital.

Owing to the great increase in the British Section it was necessary to expand very greatly the arrangements for outpatient medical treatment. Trained medical orderlies have been selected and will be posted to medical inspection rooms at all important stations and to outlying posts where medical facilities are not readily available. Minor posts in the field are furnished with first aid equipment and simple drugs.

The cost of dental treatment during the year was £P.1,005 compared with £P.641 in 1937.

The Senior Medical Officer of the Trans-Jordan Frontier Force reports that except for a higher incidence of malaria the health of the Force was satisfactory. The increase of malaria was due to the large amount of patrol work necessary in the Jordan Valley.

525 cases were admitted to hospital (of whom 51% were cases of malaria) with an average stay in hospital of 6 days. The establishment of the Force was at the end of the year 1,017 and of the reserve 166. There were six deaths four men being killed in the field. Of the deaths in hospital, one was due to pyelonephritis and one to intestinal haemorrhage complicating malaria. Ther were 4,132 attendances for outpatient treatment. There were 146 cases of primary malaria and 124 secondary. In 1937 there were 29 primary cases and 103 secondary. There were only three cases of infectious diseases, one typhoid, one mumps, and 1 case of amoebic dysentery.

Prison Medical Service.

69. As a result of the conditions prevailing in the country the accommodation in prisons, lock-ups and jail labour camps was continuously taxed to the utmost and was frequently overcrowded. The temporary detention camp north of Acre with accommodation for 1,000 "detenus" was unable to receive all persons whose detention was ordered under the Emergency Regulations.

A detention camp in huts for 392 persons was reopened at Sarafand, and at the end of the year steps were being taken to convert the Jacir building in Bethlehem for a similar purpose.

Apart from the general increase of medical work required for the attention of the larger prison population special arrangements had to be made at Sarafand and Bethlehem for the treatment of the minor ailments of "detenus". In Sarafand a sick bay of eight beds was equipped and staffed by trained medical orderlies, and it is proposed to provide a similar sick bay of five beds at the Bethlehem premises. Authority was given in November for steps to be taken to increase the hospital accommodation of the Acre prison by building a separate section of six beds for European prisoners. The new section was completed and brought into use early in 1939. The general health of prisoners and "detenus" was satisfactory. The medical officers of the department employed on the prison services carried out their duties with very great credit under exceptionally difficult conditions for which the political situation was mainly responsible.

During the year 253 prisoners were treated in Government Hospitals. In addition, there were 1,239 admissions to prison sick wards of which 19 were admissions on account of tuberculosis and 7 for criminal lunacy. There were 5 deaths of prisoners in the Jerusalem General Hospital and 4 in Haifa General Hospital.

The average prison population was 3,245, though at particular periods the actual number of prisoners was very considerably above this figure. At the dispensaries of the central prisons at Jerusalem and Acre, the jail labour camps at Nur-esh-Shams and Athlit and the detention camps at Acre the total attendances for outpatient treatment were approximately 78,500 of which 17,600 were new cases.

The Boys Reformatory School now under the administration of the Education Department was transferred to the Labour Camp of the Government Stock Farm, Acre, and its medical attention assumed by the Medical Officer of Health, Acre.

Training in First Aid to the Injured.

70. In spite of the difficulties in securing attendance at classes under the abnormal conditions the number of members of Government Departments taking the course of instruction for the certificate in First Aid of the St. John Ambulance Association was well maintained. The total number of candidates presenting themselves for examination was 264 compared with 290 during 1937. The majority of candidates were members of the Police Force for whom the qualification is now essential.

The results of these examinations are given in the Table which follows :—

FIRST AID EXAMINATIONS, 1938.

Department	No. of Candidates	Certificate		Voucher		Medallion		Label	
		Passed	Failed	Passed	Failed	Passed	Failed	Passed	Failed
Health	32	21	3	3	—	3	—	2	—
Police	156	117	19	10	—	5	—	5	—
Palestine Railways	48	48	—	—	—	—	—	—	—
Transjordan Frontier Force	18	4	4	3	1	4	1	1	—
Port, Haifa	2	2	—	—	—	—	—	—	—
Municipalities	7	6	1	—	—	—	—	—	—
I. P. C.	1	—	—	1	—	—	—	—	—
TOTAL	264	198	27	17	1	12	1	8	—

EXAMINATIONS BY MEDICAL BOARDS, 1938.

	Government Official other than Police				Police										
					Men Serving				Recruits						
	Fit for permanent service	Fit for temporary service	Unfit	Total	Fit for permanent service	Fit for temporary service	Unfit	Total	Fit for permanent service	Fit for temporary service	Unfit	Total	Special and Miscellaneous Examination	Examination on behalf of Ministry of Pensions London	Total
Central Medical Boards	257	36	6	299	4	2	4	10	—	—	—	—	108	—	417
Jerusalem District Medical Boards	12	274	53	339	184	8	11	203	—	—	—	—	1761	1	2304
Jaffa District Medical Boards	158	—	25	183	111	—	4	115	—	—	—	—	617	—	915
Haifa District Medical Boards	6	23	1	30	191	—	13	204	—	—	—	—	1422	—	1656
Samaria District Medical Boards	8	36	1	45	129	—	8	137	32	1	—	33	137	—	352
TOTALS	441	369	86	896	619	10	40	669	32	1	—	33	4045	1	5644

Medico-Legal Examinations.

71. There was a diminution of the normal medico-legal work which medical officers of the Department were called upon to perform, though post mortem reports and services in connection with coroners inquests were very greatly increased on account of deaths from violence. The number of post mortem reports was 1068 compared with 651 in 1937.

The number of requests for medico-legal reports was 2616 involving the examination of 2,561 persons and 435 attendances in courts for the purpose of giving oral evidence.

The Medical Commission.

72. The number of examinations by the Central and District Medical Boards of candidates for employment in Government service, and of officers for sick leave and invaliding was less than in 1937. There were 5,644 cases examined compared with 7,550 in 1937.

The principal reduction was in the examination of Palestinian recruits for the Police Force owing to an alteration in the system of engagement during the emergency. The Central Medical Board carried out 417 examinations of which 305 were to determine fitness for permanent service, 6 in connection with applications for sick leave or extention of sick leave, 7 for invaliding from the service and 99 were for special examinations or estimation of disability.

Apart from formal medical boards 2,145 selected recruits for the Police Force were examined by medical officers of the Department of whom 324 or 15% were found unfit.

The Practice of Medicine, Dentistry Pharmacy and Midwifery.

73. The number of licences to practise medicine granted during the year was 68 while 48 names were removed from the medical register on account of death or permanent absence from the country. The restrictive measures essential to protect the profession from overcrowding have thus resulted in a net increase of twenty six practising physicians since the end of the year 1936. As a result of political events in Europe, however, there was a large immigration of persons with medical qualifications under the immigration category of capitalist. Immigration in the professional category has been closed for many years. These new arrivals are placed on a priority list in order of application for licences and will be absorbed into the profession under the annual quota. The restrictive measures provided for the immediate grant of licences to Palestinian citizens and under a change of the law which is now receiving consideration this will be maintained.

The total number of names in the medical register at the end of 1938 was 2,228 or one practitioner to 600 of the settled population.

It has not been necessary as yet to introduce restrictions in the grant of licences to practise dentistry or pharmacy, though in the latter profession an indication of overcrowding is shown by the decline of the number of candidiates applying for the assistant pharmacists examination. Since 1935 only 14 candidates have applied for this local qualification, of whom one was granted a permit.

There were 51 dentists licensed bringing the total number on the dental register to 641 at the end of 1938. Thirty six pharmacists, one assistant pharmacist and 28 midwives were licensed in the course of the year.

Pharmacies, drug stores and dealers in poison are subject to supervision and control under the Pharmacy Ordinance, the Regulation of Trades and Industries Ordinance and the Dangerous Drugs Ordinances.

29 new pharmacies were opened and 3 were closed during the year. The total number conducting business at the end of the year was 220 against 194 in 1937.

There are in addition to the regular pharmacies :—

(1) 27 pharmacies attached to town clinics and hospitals each of which is conducted by a licensed pharmacist;

(2) 25 Government dispensaries 7 of which are conducted by licensed pharmacists;

(3) 130 village clinics to which small dispensaries are attached conducted by the Kupat Cholim, the Rural Sick Benefit Fund, different charitable and religious institutions and private doctors, in each of which the dispensing is done by the doctor in charge;

(4) 30 wholesale dealers in drugs;

(5) 93 establishments licensed to deal in poisons;

(6) 120 dealers in simple drugs, and 20 manufacturing chemists.

A satisfactory standard of equipment, arrangement and maintenance of these establishments has been attained, and compares very favourably with that in European countries.

Continuous inspection was carried out by a qualified inspector who combines these duties with the supervision of the legal trade in dangerous drugs as required under the International Opium Convention.

An examination for Assistant Pharmacists under the Pharmacists Ordinance was held in March. One local pharmacist assisted the Department by acting as examiner. Four candidates presented themselves for the examination and of these only one passed.

LICENCES OF DOCTORS, DENTISTS, *DENTAL PRACTITIONERS, PHARMACISTS, *ASSISTANT PHARMACISTS AND MIDWIVES IN FORCE ON 31st DECEMBER, 1938.

	No of licences at end of 1937	Number Licensed during 1938	Number of Licences Cancelled during 1938	Cancellation withdrawn during 1938	Number of Licences in force at end of 1938
Doctors	2206	68	46	—	2228
Dentists	593	51	4	1	641
Dental Practitioners*	28	—	2	—	26
Pharmacists	393	36	5	—	424
Assistant Pharmacists*	45	1	—	—	46
Midwives	513	28	9	—	532

* Permits renewable annually

International Opium Convention.

74. Traffic in opium and other dangerous drugs is governed by the Dangerous Drugs Ordinance, 1936.

No changes or new legislation have been effected during the year.

The number of import certificates for dangerous drugs granted during the year was 108.

Actual imports were as follows :—

	Kilogrammes
Medicinal Opium	4.500
Opium in form of preparation	10.582
Morphine	1.357
Diacetylmorphine	0.121
Cocaine	2.840
Eucodal	0.091
Dicodide	0.119
Dilaudide	0.025
Acidicone	0.009
Codeine	14.880
Dionine	1.052
Indian Hemp in the form of Galenical Preparations (Tinctures and Extracts)	.350

In December all licensed pharmacists rendered a return of the amounts of dangerous drugs they had dealt in during the year and gave their estimated requirements for the ensuing year.

12 reports were forwarded to the Permanent Central Opium Board, as follows :—

Annual Report.

Annual Estimates of Imports and Exports of Methylmorphine and Ethylmorphine.

Annual statistics of Production and Manufacture.

Annual Statistics of Consumption.

Annual Statistics of Confiscations.

Annual Statistics of Stock.

Annual Estimates of Drugs.

Annual Estimates of Raw Material.

4 Quarterly Statistics of Imports and Exports.

SECTION V.

SANITARY ADMINISTRATION.

Rainfall and Water Supplies

75. The average of the rainfall recorded at 119 stations for the wet season of the winter 1937-38 was 610 mms. This compares with the average figure of 497 mms. in the previous winter. The greatest precipitation was recorded at Mi'ilya in Acre District with 1175.4 mms. and the lowest 101.5 at Ras as Zuweira excluding the Jericho area in the Jordan Valley. The dry season of the year extends from May to November.

The onset of the winter season 1938-39 was marked by exceedingly heavy rainfall in November when 433.0 mms. was recorded at Sarona. Much flooding and damage resulted including a wash-out of the pumping main of the Jerusalem city supply from Ras-el-Ain. This was repaired under most difficult conditions bythe Public Works Department before it was necessary to reduce the supplies to consumers to any appreciable extent.

The monthly consumption of water in Jerusalem was lower than in 1937 except in the months of January, February, July and August. The total decline of water taken amounting to about 2½%. Consumption per head from this supply was less than 9 gallons per day, but the main supply is supplemented by private household rainwater cisterns. The cost of water was raised from 45 mils to 50 mils per cubic metre (almost 4s 6¾d per 1000 gallons) a price which unfortunately from the public health aspect compels economy in the use of this safe and guaranteed supply.

The Municipality, however, supplies water at 40 mils per cubic metre to fifteen public hospitals, a price which is equivalent to the cost of water delivered to the main service reservoir of the town.

Some 5000 metres of new six inch and eight inch service mains were laid during the year. The Department ensures that connections to households are not made until samples taken from new mains show consistently good bacteriological findings. Continuously during the year samples of water are taken from the service reservoir and from domestic taps and public stand pipes for bacteriological examination.

In Jerusalem district a scheme for the supply of Ramallah town and El Bireh from the Ain Fara source was under consideration, but the deterioration of security conditions led to its postponement. The Hebron town supply was operating satisfactorily. The improvements to the well and pumping plant were effective in increasing the supply. The pumping station was the successful object of sabotage on two occasions, but repairs were rapidly effected. Exploration of underground water resources was carried out in the areas south of Beersheba. Sixteen artesian wells were bored, but where water was found it was in most cases of a salinity which was too high for drinking or irrigation. In two cases, however, water possible of use was found. Further exploratory work had to be suspended owing to the disturbances.

There has been no material change in the public water supply of Jaffa town, though work is in hand for the construction of a new well to tap the underground waters for a supply to the southern part of the town. By the end of the year the construction of the service water tower had been completed.

Constant supervision was maintained over the Tel-Aviv supply from deep wells. Two wells were closed on account of unsatisfactory laboratory findings pending the installation of automatic chlorinating plants. In suburban settlements similar action was taken in one case, and two other settlements (Rishon and Shearayim) have been advised to provide for chlorinating plant in their forthcoming estimates.

Ramleh town is suffering from a lowering of the water level in their main wells. Financial stringency has prevented work being commenced on the construction of new bores.

There was no marked shortage of water in the Arab villages. At the instigation of the district medical officers service reservoirs in seven villages were reconstructed or demolished and repaired on more sanitary lines. Three village supplies with motor driven pumps were completed and one was nearing completion at the end of the year.

The final report of the consulting engineers for the supply of water for Haifa town was submitted in July. The source recommended for use in the first instance is from bores sunk at Wadi Falah. This source will supply 5½ million gallons per day. Softening and chlorination plant is included in the scheme which is estimated to require a capital expenditure of £P.575,500, providing water at 22.5 mils per cubic metre to the consumer.

The political situation has led to suspension of steps to raise a loan for this very essential municipal undertaking. Meanwhile water is supplied to a proportion of the inhabitants from various private enterprises which require constant supervision to ensure the necessary effective chlorination. It will be a propitious day for the town when these can be replaced by a reliable municipal water supply at a reasonable cost to the consumer.

Owing to disturbed conditions no great progress was made in improving supplies in other towns of the district, though the installation of an alumen treatment and chlorinating plant was commenced towards the end of the year at Acre. At Nazareth water had not been found in the new well which had been carried to a depth of more than 130 metres.

The Nablus town supply continued to be ample and satisfactory in quality. In Jenin the cause of consistently bad results on bacteriological examination was finally traced to the condition of the service reservoir. A scheme for supplementing the town supply by utilising another source has been prepared. The unsatisfactory features of the intake from the lake for the supply of Tiberias town which were emphasised by this Department at the time of construction are now most apparent. The only remedy to safeguard the supply is to construct a new intake further from the town and at a distance from the shore which will ensure a water of a reasonably constant quality being delivered to the reservoirs and chlorinating plant. At present the variations in the bacterial count and suspended matter of the raw water necessitate very heavy over-chlorination. In Tulkarm the town well is definitely affected by underground sewage contamination and chlorination by hand is carried out.

The activities of the Village Water Supply Committee were suspended owing to lack of funds.

Drainage and Sewerage Schemes.

76. There was no significant progress made with schemes for the main sewerage of principal towns and expenditure on this form of improvement in the smaller municipalities, difficult to secure at the best of times, had to be almost entirely suspended.

In Jerusalem town the section of the main sewer required for the drainage of the military cantonment on Bethlehem road was completed and preliminary steps taken for the construction of Section VIII of the main scheme, including the new disposal works to the south west of the town. The Department has advised that in this location complete sewage works are required including the utilisation of the whole of the effluent on the land. There were lesser extensions of the main sewers in other quarters and four to five hundred metres of laterals were completed, for the most part at owners expense.

An amendment of the Drainage, Sewerage and Water Supply Ordinance was under consideration to speed up the construction of laterals to connect with main sewers in areas forming units of an approved town sewerage system.

In Jaffa and Tel Aviv no progress has been made to elaborate the outline schemes recommended by the Consulting Engineers. In both cities prospects of financing main drainage for same years to come are unfortunately remote. Such minor drainage work as has been carried out is of a piece-meal nature to remedy urgently insanitary conditions. In these areas it has required the utmost vigilance on the part of this department to secure design which will as far as possible fit in with the major schemes when these are embarked upon.

In Haifa town extension of the main sewer in the Ard el Raml quarter proceeded and was almost completed by the end of the year, but the commencement of the sea outfall with its collecting main sewers was deferred.

Village Sanitation.

77. There was a virtual suspension of progress in this field. Funds were not available for continuance of the installation of latrines in villages on any effective scale, and conditions in rural areas precluded activities of this nature. The organisation of village scavengers which had been proceeding in some villages broke down during the period when effective administrative control was impossible.

Municipal Sanitary Services.

78. In a year of civil disturbance effort had necessarily to be directed to the maintenance of these public services rather than their expansion and development. As public services essential for normal community existence the scavenging services and their personnel were frequently the object of organised terrorism. In the three principal towns the personnel of the Municipal Sanitary Departments carried on their work under constant difficulty and danger. In both Jerusalem and Haifa towns inspectors were assassinated whilst engaged on their duties and in Haifa the acting Sanitary Surveyor narrowly escaped a similar fate in the first month of 1939. The British officers of the Municipal Departments in Jaffa, Jerusalem and Haifa and their Palestinian assistants deserve great credit for the maintenance of public services under difficult conditions.

In the smaller towns and Municipalities these services were from time to time in complete abeyance, but with the restoration of order in urban areas administrative officers cooperated with medical officers in re-organising and re-establishing the municipal services.

One result of the disturbed conditions was the decrease in the numbers of unauthorised hutment dwellings in the towns of Jaffa and Haifa. In Haifa nearly 6000 dwellings of this insanitary type had been abolished by the end of 1938. If effective measures are taken to prevent their re-appearance after the return of the country to more normal conditions the account of the civil disturbances will not be wholly on the debit side. The methods of disposal of refuse remained as described in last year's report.

Sanitary Engineering Section.

79. The urban division dealt with the usual variety of projects and schemes on which technical advice was required. Amongst the more important matters reported upon were schemes for the improvement of public water supplies of Acre, Hebron, Tulkarm and Jaffa towns, the examination and report upon a scheme for the water supply of a hospital at Ajloun in Transjordan, the provision of a memorandum regarding the location and safeguarding of wells in settlement areas where disposal of sewage is by septic tank and subsurface irrigation, the consideration and report upon sectional systems of drainage in Jaffa and Tel Aviv towns; recommendations to Hebron Municipal Commission on the preliminary steps to be taken for a sewer system in part of the town; reports and inspections upon proposed schemes of drainage for Gaza and Majdal towns and minor schemes of improvement in Safad and Jenin. In addition a large number of schemes for hospitals, Government and private institutions and industrial concerns was dealt with.

Amongst the more important were a 100 bedded hospital in Jerusalem; extensions of Tel Aviv Municipal Hospital; new mother craft training centre and baby home in Tel Aviv; revision of a scheme for a private convalescent and chronic diseases home at Ramat Gan; six small cinemas in various towns and settlements; two municipal markets; and a large number of individual trades and industries in relation to the Department's requirements for sanitation and the health and hygiene of the employees.

During the military operations resulting in the reoccupation of the Old City in Jerusalem, the engineer undertook the provision of sanitary facilities for the large number of persons temporarily detained for examination and identification.

The rural division continued with the improvement works of the Birket Ramadan anti-malarial drainage scheme and the satisfactory maintenance of malaria drainage schemes throughout the country. The sanitary engineer's section participated in the instruction and training of departmental personnel in sanitation, drainage, antimalarial control, refuse destruction and disposal and the maintenance and operation of mechanical disinfecting plant.

Trades and Industries.

80. The application of the Ordinance was maintained under difficulties in the large towns and in certain rural areas it was completely suspended owing to the unsettled state of the country. Notwithstanding the obstacles encountered, 19,089 licences were issued during the year 1938 as compared with 21,888 for the previous year, while 24,132 inspections for licence applications and 87,726 routine inspections were effected, 2456 persons were prosecuted for infringements of the terms of the Ordinance and 5,654 warning notices were issued. Included in the number of licences issued are 1040 establishments for the sale of intoxicating liquors and places of public entertainment, which though not licensable under the Trades and Industries (Regulation) Ordinance are controlled in all other respects under the terms of that Ordinance.

Establishments or depots for receiving goods or material for laundry, dyeing, or dry cleaning purposes were added to the schedule of controlled trades. While amendments to the schedule to bring under control all stores of comestible articles, which are not at the time for retail sale to the public, are under consideration by Government. A table showing the class and number of trades licensed is given on pages 97, 98 and 99.

Control of Foodstuffs.

81. The application of the Public Health (Rules as to Food) Ordinance and Rules made thereunder has been actively maintained in the larger towns during the year under review with some unavoidable relaxation in rural districts. The maintenance of the prescribed standards for butter, semneh, edible oils and fats and milk has been given particular attention and control of the labelling of foods is now in general operation. Sampling of foodstuffs and the seizure and condemnation of foods unfit for human consumption has been applied with increased effort and in this connection 6770 samples were examined with 490 cases of adulteration as compared to 5,478 samples with 550 cases of adulteration in the previous year. In addition 26,082 kilograms of unfit foodstuffs were confiscated and 3,947 labels of food were examined with 653 infringements of the Labelling of Foodstuffs Rules.

The following amendments have been made to the Food Ordinance and Rules.

The Labelling of Foodstuffs Rules now prescribe that the weight of the contents of the container shall be expressed in terms of the metric system.

Powers have been conferred on Medical Officers of the Department of Health to condemn, seize, and have destroyed foodstuffs which in their opinion are unfit and unwholesome for human consumption.

A revised standard for the fat content of cream is under consideration by Government.

The following table gives particulars of the major items of foodstuffs sampled, adulterated, and the quantities destroyed as unfit for human consumption:

ITEM	No. of Samples taken	No. adulterated	Kilograms of food destroyed as unfit
Olive Oil	507	56	—
Other Edible oil and fats	220	31	—
Native Butter (Semneh)	319	32	83.5
Butter	468	64	—
Raw Milk	4,825	148	127
Honey	61	11	—
Coffee	163	12	—
Jams	77	21	—
Meat (fresh)	—	—	3,890
Meat (preserved)	—	—	567
Fish (fresh)	—	—	9,383
Fish (preserved)	—	—	86
Vegetables and Fruit	—	—	10,623
Rice	—	—	400
Bread	—	—	39

NUMBER OF TRADES AND INDUSTRIES IN PALESTINE LICENSED DURING THE YEAR 1938.

Nature of Trade or Industry and Classification in the Schedule under the Trades and Industries Ordinance, 1927	SUB-DISTRICT OF																		TOTALS
	Jerusalem	Ramallah	Bethlehem	Hebron	Beersheba	Jaffa	Tel-Aviv	Ramleh	Gaza	Majdal	Haifa	Acre	Nazareth	Nablus	Jenin	Tulkarm	Tiberias	Safad	
CLASS I. A.																			
1. Bakeries, public ovens, bread and bakers' shops	119	10	5	7	5	65	187	12	14	8	82	17	17	19	9	15	17	18	626
2. Butchers shops and Tripe shops	170	17	27	10	3	65	247	10	10	19	179	14	26	20	6	20	22	16	881
3. Cold storage establishments	1	—	—	—	—	1	7	—	—	—	3	—	—	—	—	—	—	—	12
4. Confectionery, sweetmeat, jam and preserved fruit establishments (including pastry shops)	34	—	—	—	2	29	51	—	4	—	18	14	2	35	4	4	—	1	198
5. Confectionery factories	8	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	9
6. Fish frying shops	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7. Fish shops	22	—	—	—	—	15	88	1	—	—	21	1	—	1	—	—	8	1	158
8. Flour and corn mills	18	12	8	13	5	26	7	—	13	15	10	2	7	8	7	—	1	4	156
9. Grain and cereal shops	18	7	12	16	14	35	41	4	21	3	47	6	2	21	1	15	6	—	269
10. Groceries, flour stores and shops for the sale of vegetables and fruit	958	129	120	89	99	881	1404	113	153	125	696	153	103	231	93	129	147	96	5719
11. Ice cream factories, shops and stores	7	—	—	—	—	4	51	—	1	—	26	2	—	2	—	1	—	—	94
12. Macaroni factories	1	—	—	—	—	1	—	—	—	—	1	—	—	—	—	—	—	—	3
13. Milk, butter, cheese and dairy produce shops	24	—	—	—	—	18	73	—	1	—	62	—	2	17	—	—	1	—	198
14. Oil mills and oil stores (other than mineral oil stores)	21	55	2	—	—	1	25	5	3	4	9	5	—	8	—	—	—	—	138
15. Pickle manufacturers	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	1
16. Poultry shops	56	—	—	—	—	17	55	—	—	—	3	—	—	—	—	—	4	—	135
17. Preserved fish depots	—	—	—	—	—	—	14	—	—	—	—	—	—	—	—	—	—	—	14
18. Public kitchens	5	2	—	—	—	—	—	—	—	—	—	22	—	—	—	—	—	—	29
19. Aerated water factories	4	—	—	—	—	12	12	2	—	—	6	1	2	—	—	1	1	—	41
20. Factories for the manufacture or preparation of edible oils and fats	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
21. Factories for canning, curing or preserving meat or fish (including sausage factories)	4	—	—	—	—	—	13	—	—	—	6	—	—	—	—	1	1	—	25
22. Ice factories and ice stores	6	—	—	—	—	10	15	—	—	—	14	2	2	1	2	1	5	—	58
23. Sugar refineries and factories, molasses factories	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
24. Public markets (excluding horse and cattle markets)	1	—	—	—	—	4	2	—	—	—	—	—	—	—	—	—	1	—	8
25. Establishments for the sale of non-alcoholic beverages	25	—	—	—	—	46	159	—	—	—	148	—	—	—	—	1	1	—	380
26. Manufactories of water ice (Barrad)	—	—	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	2
27. Enterprises for the supply of water by pipe to the public for domestic or industrial purposes	—	—	—	—	—	3	—	—	—	—	9	—	—	—	—	—	—	—	12
28. Carriers and transporters of meat, fish, ice and milk	8	—	—	4	—	—	151	—	—	—	2	—	—	—	—	—	4	3	172
29. Factories for the preparation and manufacture of patent flours, baking powder, patent cereal foods, and invalid and infant foods ...	1	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	4
30. Factories for the preparation of dried or condensed milk	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
31. Factories for the canning or preserving of vegetables or fruit ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1
32. Manufacturers of imitation or artificial vinegar	—	—	—	—	—	4	—	—	—	—	—	—	—	—	—	—	—	—	4
CLASS II. A.																			
1. Premises licensed under the Sale of Intoxicating Liquors Ordinance, 1935, or Places of Public Eentertainment licensed under the Public Entertainments Ordinance, 1935	259	10	40	—	1	103	225	—	6	—	303	—	35	9	4	—	38	7	1040
2. Alcohol Depots	2	—	—	—	—	—	11	—	—	—	1	—	—	—	—	—	—	—	14
3. Cafes and restaurants not licensed under the Sale of Intoxicating Liquors Ordinance, 1935, or the Public Entertainments Ordinance, 1935	190	12	16	11	17	159	348	25	18	13	165	22	14	38	15	31	26	7	1127

NUMBER OF TRADES AND INDUSTRIES IN PALESTINE LICENSED DURING THE YEAR 1938 (*Continued*).

Nature of Trade or Industry and Classification in the Schedule under the Trades and Industries Ordinance, 1927	SUB-DISTRICT OF																		TOTALS
	Jerusalem	Ramallah	Bethlehem	Hebron	Beersheba	Jaffa	Tel-Aviv	Ramleh	Gaza	Majdal	Haifa	Acre	Nazareth	Nablus	Jenin	Tulkarm	Tiberias	Safad	
4. Hotels, Lodging houses and boarding houses not licensed under the Sale of Intoxicating Liquors Ordinance, 1935	56	—	—	2	2	32	73	1	3	3	81	—	6	10	3	5	27	9	313
5. Public baths, bathing places and wash houses	12	—	—	3	—	2	3	—	3	—	3	2	—	5	—	1	2	—	36
6. Breweries, wine presses and factories of alcohol, vinegar or any fermented or spirituous liquor	—	—	—	—	—	2	—	—	—	—	2	—	—	—	—	—	—	—	4
7. Establishments where second hand jewellery or second hand household or personal effects are purchased or sold	19	—	—	—	—	11	31	—	—	—	4	—	—	1	—	—	—	—	66
8. Money lending establishments where jewellery and/or other articles of value are taken or held as security for loans	—	—	—	—	—	—	4	—	—	1	—	—	—	—	—	—	—	—	5
9. Establishments for the repair or sale of bicycles	8	—	2	1	2	16	28	5	—	—	7	—	—	2	—	—	5	—	76
CLASS II. B.																			
1. Establishments for the retail sale of petroleum, paraffin and mineral oils	19	1	6	2	4	9	506	2	8	8	11	9	3	14	2	9	7	9	629
2. Establishments employing power driven machinery	173	1	14	2	—	254	371	12	3	—	253	30	13	—	15	40	32	2	1215
3. Establishments employing steam under pressure	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1
4. Garages for motor vehicles (Public garages and garages for public vehicles)	30	8	—	1	—	24	8	—	2	—	28	3	11	9	1	4	2	3	134
5. Asphalt and bitumen factories	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	1
6. Factories of Explosives or of articles containing explosives	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1
7. Match factories and store houses for matches	—	—	—	—	—	—	1	—	—	—	—	1	1	1	—	—	—	—	4
8. Stores for explosives (other than ammunition)	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1
9. Factories for the manufacture of mineral acids and other chemical products and stores for such products	—	—	—	—	—	1	16	—	—	—	4	—	—	—	—	—	—	—	21
10. Petroleum, paraffin and mineral oil stores	27	5	—	—	2	16	33	—	—	5	32	6	9	3	8	8	7	5	166
11. Premises for the repair or sale of firearms or ammunition	7	—	—	—	—	—	—	—	—	—	3	—	1	—	—	—	—	—	11
12. Warehouses for firearms and ammunition	—	—	—	—	—	1	—	—	—	—	1	—	—	—	—	—	—	—	2
13. Shops for the sale of explosives	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
14. Hawkers	323	56	8	1	12	72	775	12	33	17	418	24	225	26	—	66	112	13	2193
15. Timber stores not being Customs Warehouses	—	—	—	—	—	1	—	—	—	—	3	—	1	—	—	—	2	—	7
16. Carpentry workshops and sawmills (not employing power driven machinery) and establishments for the retail sale of timber ...	12	5	—	—	—	28	37	16	39	20	42	—	—	35	—	—	16	—	250
CLASS III.																			
1. Cattle and horse markets	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2. Cattlesheds in which cattle are kept for dairy purposes	157	—	4	—	3	53	8	—	—	—	189	—	280	—	80	42	9	16	841
3. Cattlesheds within the area of a local authority, in which cattle are kept for other than dairy purposes	—	—	29	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	30
4. Dairies in which milk and cream are prepared for distribution or butter or cheese is manufactured	2	—	—	—	—	3	8	—	—	—	17	—	10	—	2	—	4	-	46
5. Public Stables and khans and all stables or yards in which animals or birds are kept for commercial or industrial purposes	8	2	3	—	1	1	4	6	3	—	10	1	1	8	—	5	4	2	59
6. Slaughter houses	1	—	1	—	—	—	9	—	—	—	—	—	—	1	—	1	1	—	14
7. Pigsties and piggeries	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8. Establishments for the preparation, patting, packing or storage of butter or other dairy products	4	—	—	—	—	2	9	—	—	17	10	—	—	—	—	—	—	—	42
9. Establishments for the slaughtering of poultry	3	—	—	—	—	—	—	—	—	—	7	—	—	—	—	—	—	—	10

NUMBER OF TRADES AND INDUSTRIES IN PALESTINE LICENSED DURING THE YEAR 1938 (*Continued*).

Nature of Trade or Industry and Classification in the Schedule under the Trades and Industries Ordinance, 1927	SUB-DISTRICT OF																		TOTALS
	Jerusalem	Ramallah	Bethlehem	Hebron	Beersheba	Jaffa	Tel-Aviv	Ramleh	Gaza	Majdal	Haifa	Acre	Nazareth	Nablus	Jenin	Tulkarm	Tiberias	Safad	
CLASS I. B.																			
1. Barbers and hairdressers	154	11	15	9	4	137	200	21	23	19	169	31	24	29	7	14	20	17	904
2. Dye-works, laundries and dry cleaning establishments and establishments and depots for receiving clothing or other materials for dyeing laundry or dry cleaning purposes	28	—	—	—	5	23	64	4	13	9	21	3	3	3	—	3	1	2	182
3. Factories for heating, cording, pressing, weaving, spinning, or otherwise preparing wool, hair, cotton, silk or jute for trade purposes	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	6	—	7
4. Pharmacies and drug stores (including Attars)	57	2	2	2	1	31	131	3	9	—	67	11	11	5	5	17	14	4	270
5. Rag and second hand clothing establishments	9	2	—	1	—	20	—	—	—	—	10	1	4	3	—	—	1	—	51
6. Starch factories	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7. Manufacturing chemists and druggists and manufactories of medical products	2	—	—	—	—	5	—	7	—	—	—	1	—	—	—	—	—	—	15
8. Perfumeries and scent manufactories	1	—	—	—	—	4	2	—	—	—	3	—	—	—	—	—	—	—	10
9. Premises on which materials containing poison are made or sold for agricultural purposes	—	—	—	—	—	1	2	—	—	—	—	—	—	—	—	—	—	—	3
10. Public pathological and bacteriological laboratories	1	—	—	—	—	—	9	—	—	—	3	—	—	—	—	—	—	—	13
11. Factories for the preparation or manufacture of toilet requisites ...	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3
12. Stone crushing machinery (portable)	24	1	8	1	—	8	—	—	—	—	—	—	—	2	—	3	—	—	47
CLASS I. C.																			
1. Alkali works	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2. Blood boiling establishments	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3. Bone boilers	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4. Bone burners	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5. Crematoria	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6. Fellmongers (including furriers)	—	—	—	1	—	—	—	—	7	—	—	—	1	1	—	—	1	—	11
7. Gut scrapers	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8. Knackers	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9. Lime kilns	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	1
10. Manure depots including depots for refuse and artificial manure depots and factories	—	—	—	1	—	4	1	—	—	—	—	—	—	—	—	—	—	—	6
11. Potteries, brick works and tile making industries	24	—	3	3	—	11	25	4	5	1	13	—	—	3	1	—	2	—	95
12. Tallow makers	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
13. Tanneries	—	—	—	4	—	—	—	—	—	—	2	—	—	—	—	—	—	—	6
14. Tripe boilers	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
15. Candle factories	—	—	2	—	—	2	2	—	—	—	—	—	—	—	—	—	—	—	6
16. Mirror factories	3	—	—	—	—	3	4	—	—	—	1	—	—	1	—	—	—	—	12
17. Paint factories	—	—	—	—	—	1	—	—	—	—	4	—	—	—	—	—	—	—	6
18. Paper factories	—	—	—	—	—	—	1	—	—	—	—	—	—	1	—	—	—	—	2
19. Soap factories (using animal or vegetable oils and fats)	—	1	—	—	—	2	5	1	—	—	2	1	—	21	—	—	—	—	33
20. Tobacco, tombac, cigarettes or snuff factories	2	—	1	—	—	1	3	—	—	—	4	—	1	—	—	—	—	—	12
21. Cement factories	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1
22. Glue factories	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1

SECTION VI.

QUARANTINE.

General.

82. The only important change in the organization of the quarantine service was the opening of the Tel-Aviv Jetty and Lighter Harbour section of Jaffa port for passenger and immigrant traffic. This was sanctioned on the 13th May when the necessary buildings were completed and equipped. A large proportion of passenger and immigrant traffic was diverted to this landing stage and the statistics for the year indicate that 28% of persons arriving in Palestine by sea disembarked at Tel Aviv. The disembarkation of immigrants at Tel-Aviv was limited to a maximum of 300 in one day which is the maximum which the facilities provided can properly handle. Haifa port with its complete arrangements for immigration and passenger traffic dealt with 65% of arrivals by sea.

Quarantine restrictions were imposed against arrivals from infected places at various times during the year as follows :—

Against cholera : Bombay, Calcutta, Allahabad, Delhi, Cawnpore, Hong-Kong, Shanghai, Hanoi, Afghanistan.

Against plague : Colombo, Rangoon.

Against smallpox : Calcutta, Hong-Kong, Rangoon, Bombay, Karachi, Cawnpore, Delhi, Shanghai.

The Palestine ports and the country as a whole were free from diseases to which the International Sanitary Conventions apply with the exception of sporadic cases of murine typhus.

Jaffa Port and Tel-Aviv Lighter Harbour.

83. There was an increase of traffic compared with 1937. 1,463 steamers and 534 sailing vessels were dealt with compared with 929 steamers and 660 sailing vessels in 1937. 769 steamers and 30 sailing vessels called at Tel-Aviv. 2,527 travellers disembarked at Jaffa of whom 49 were immigrants and at Tel-Aviv the numbers were 12,435 of whom 3,570 were immigrants.

Routine rat catching operations in the port and adjacent town quarters were continued and 773 rats were trapped. Postmortem examinations revealed no plague infected or suspected rats. The classification of rats caught and the fleas recovered from these rodents is given in Section VIII of this report.

Haifa Port.

84. There was a slight decrease in the number of vessels calling at this port. 2,234 vessels were dealt with compared with 2,426 in 1937. 28,071 travellers disembarked of whom 7,237 were immigrants. The corresponding figures for 1937 were 26,051 and 9,061.

Four steamships, three sailing vessels and two Government tugs were fumigated by Clayton Gas Apparatus resulting in the destruction of 144 rats. Seven "deratization" certificates and two exemption certificates were issued.

Acre and Gaza Roadsteads.

85. 357 vessels were examined at Acre and Gaza roadsteads, the majority being coasting sailing vessels.

Air Traffic.

86. 2,675 aircraft landed at the airports of Lydda, Haifa and the seaplane base at Lake Tiberias. There were also nine aircraft which called at Gaza landing ground during January and February since when this aerodrome has been closed for civil air traffic. Health supervision of passengers was carried out in accordance with the requirements of the International Sanitary Convention for Aerial Navigation.

Medical Surveillance of Travellers and Immigrants.

87. 45,646 persons entering Palestine by sea and air were notified to their destinations for health surveillance. Of these, 2,813 were travellers by air and 15,263 were immigrants. In the case of the latter, the usual medical examination and vaccination against smallpox and enteric fever were carried out by officers of the department.

Moslem Pilgrimage to Mecca.

88. 699 Palestinians and 28 Trans-Jordan residents proceeded on the pilgrimage to Mecca under the arrangements made by the Department of Health. In accordance with the pilgrimage agreement with neighbouring countries all pilgrims were vaccinated against smallpox and cholera before departure and were in possession of return tickets issued by the department for the journey from Suez. Three pilgrims died in the Hijaz and one shortly after his return to Palestine. In addition to these pilgrims, 140 Palestinians and 19 Trans-Jordanians who had left Palestine as ordinary travellers also proceeded on the pilgrimage before returning to this country. 77 foreigners passed through Palestine en route for the Hijaz and before their departure steps were taken to ensure that they were in possession of the necessary health certificates. All returning pilgrims were subjected to surveillance for five days at their destinations including 250 foreigners who travelled through Palestine on the journey to their homes.

MECCA PILGRIMAGE, 1938.

District	Vaccinated		Inoculated		Proceeded		Notified of return		Observed on return		Remarks
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Jerusalem	6	10	6	10	5	10	5	10	5	10	
Ramallah	5	3	5	3	5	3	5	3	5	3	
Bethlehem	1	1	1	1	1	1	1	1	1	1	
Hebron	56	66	56	66	56	66	56	66	56	66	
Beersheba	5	3	5	3	5	3	5	3	5	3	
Jaffa	30	27	30	27	30	27	30	27	30	27	
Ramleh	8	10	8	10	8	10	7	10	7	10	One died.
Gaza	35	24	35	24	35	24	35	24	35	24	
Majdal	25	31	25	31	25	31	24	31	24	31	One died.
Haifa	21	35	21	35	21	35	21	35	21	35	
Acre	8	3	8	3	8	3	8	3	8	3	
Nazareth	2	4	2	4	2	4	2	4	2	4	
Nablus	71	90	71	90	71	89	70	89	70	89	One died.
Tulkarm	43	46	43	46	42	45	42	45	42	45	
Tiberias	2	2	2	2	2	2	2	2	2	2	
Safad	4	8	4	8	4	8	4	8	4	8	
Jenin	7	11	7	11	7	11	7	11	7	11	
TOTALS	329	374	329	374	327	372	324	372	324	372	

Trans-Jordanians 28.

Immigration.

89. The total number of persons registered as immigrants during 1938 was 15,263. Their classification by country of origin was as follows :—

CLASSIFICATION OF IMMIGRANTS BY COUNTRIES OF ORIGIN.

Countries of Origin	Totals	Jews	Non-Jews
British Empire (excluding Aden and India)	1,466	109	1,357
Central Europe	7,380	7,260	120
Eastern Europe	4,284	4,266	18
Balkan States	67	47	20
Other European Countries	555	407	148
North Africa	275	67	208
Asia	1,012	593	419
United States of America	121	94	27
Central and South America	91	15	76
Other Countries, stateless and undefined	12	10	2
	15,263	12,868	2,395

12,823 immigrants and travellers permitted to remain as immigrants were medically examined under the immigration regulations as follows :—

	Jerusalem	Tel-Aviv	Haifa	Other Centres	Total
Total examinations	512	4,542	7,676	93	12,823
Percentage examined	3.99	35.42	59.86	0.73	100

RECORD OF QUARANTINE PROCEDURE WITH VESSELS, 1938.

	Free Pratique			In Quarantine			
	No. of Steam-ships	No. of Sailing Vessels	Totals	No. of Steam-ships	No. of Sailing Vessels	Totals	Total of Vessels
January	272	28	300	—	—	—	300
February	274	15	289	—	—	—	289
March	324	59	383	—	—	—	383
April	236	92	328	—	—	—	328
May	260	113	373	—	—	—	373
June	251	164	415	—	—	—	415
July	251	288	539	—	—	—	539
August	259	266	525	—	—	—	525
September	240	93	333	—	—	—	333
October	288	130	418	—	—	—	418
November	323	67	390	—	—	—	390
December	363	32	395	—	—	—	395
TOTALS	3341	1347	4688	—	—	—	4688

RECORD OF PERSONS SUBJECTED TO MEDICAL SURVEILLANCE DURING 1938.

	Number Notified	No. found at destination	No. not found at destination	Percentage found
Jaffa by Sea	2,527	2,527	—	100.00
Haifa by Sea	28,071	26,632	1,439	94.87
Acre by Sea	—	—	—	—
Gaza by Sea	—	—	—	—
Tel Aviv by Sea	12,435	12,008	427	96.56
Lydda Air Port	1,689	1,689	—	100.00
Haifa Air Port	885	885	—	100.00
Tiberias Air Port	39	37	2	94.87
TOTALS	45,646	43,778	1,868	95.90

NUMBER OF AEROPLANES LANDING, 1938.

	Lydda	Haifa	Tiberias	Gaza	Totals
January	128	25	8	5	166
February	109	25	13	4	151
March	134	31	36	—	201
April	138	26	39	—	203
May	137	30	33	—	200
June	143	29	35	—	207
July	155	34	40	—	229
August	167	34	25	—	226
September	168	53	26	—	247
October	163	73	32	—	268
November	136	85	33	—	254
December	144	146	42	—	332
TOTALS	1722	591	362	9	2684

SECTION VII.

RELIEF.

General.

90. Towards the end of the year measures were necessary to relieve undernourishment and starvation which were becoming more prevalent in the poorer classes of the town populations. The causes leading to this situation need not be detailed here. The department cooperated with District Commissioners under whose direct administration the coordination of relief measures was placed. Apart from special issues of food for short emergency periods the department from its experience in relief measures strongly advocated the provision of relief work for males and the restriction of issues in kind or food tickets to women and children through Infant Welfare Centres or special relief bureaux set up for that purpose. A very great amount of time and labour was expended by medical officers and infant welfare staff in investigating cases of distress and in cooperating in the issue of rations.

In November in the course of a four days strike at Jaffa arrangements were made for the issue of bread and tinned milk to needy persons. Fear of reprisals, however, prevented those requiring this assistance from availing themselves of it.

Public Health Laboratory & Anti-Rabic Service

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SECTION VIII.

LABORATORY SERVICES.

General.

91.—(1) The Department's laboratories in Jerusalem, Jaffa and Haifa, aided by a number of scientific institutes maintained by private funds, have fully catered for all public health requirements. The Government Central Laboratories in Jerusalem consist of three divisions — bacteriological, entomological, and chemical. The bacteriological division includes the central anti-rabies institute and the calf-lymph establishment, while the chemical division comprises the general analytical section and the bio-chemical and agricultural branches. These laboratories, in addition to providing every facility for the diagnosis of disease and the investigation of health problems, are also responsible for the analytical examination of foods, waters and drugs, for bio-chemical, medico-legal and chemico-legal investigations, for agricultural analyses, for the preparation of smallpox lymph, antirabic vaccine and all other prophylactic and curative vaccines required in Palestine and Trans-Jordan, for the histo-pathological examination of morbid material and for the verification of weights and measures. The Department's port and quarantine laboratories at Haifa and Jaffa have afforded every assistance in diagnosis and in the bacteriological examination of water and milk supplies. The laboratory accommodation in the new Haifa Hospital is designed for both bacteriological and chemical work and is sufficiently ample to anticipate the probable needs of the rapidly growing port. During the year it has also been considered expedient to extend the laboratory services available to the Jaffa District, with the result that diagnostic facilities now exist both at the port itself and at the Bnei-Braq infectious diseases hospital which lies to the north of Tel-Aviv.

Supervisory control over public pathological and bacteriological laboratories has continued to be vested in the Department and frequent inspections of the various district laboratories and provincial anti-rabies treatment centres have been made.

Bacteriological specimens submitted for examination during 1938 numbered 255,239 including 28,626 cultural investigations and 1,582 animal inoculations. The total investigations, it is true, have fallen short of the 1937 figure by 13,298 but such reduction is to be explained by traffic restrictions; in any case the total exceeds that for 1936 by nearly 30,000. In addition the bacteriological division of the central laboratories has prepared 159,200 doses of calf-lymph, 157,700 c.c. of killed carbolised antirabic vaccine, 85,710 c.c. of anti-enterica, 3,570 c.c. of anti-cholera and 1,320 c.c. of anti-plague prophylactics. Vaccine issues have included 171,565 doses of calf-lymph, 187,510 c.c. of antirabic vaccine, 71,360 c.c. of T.A.B. vaccine, 18,390 c.c of T. 2,340 c.c. of anti-cholera and 210 c.c. of anti-plague vaccines. The issues of anti-enterica prophylactics and of carbolised rabies virus have been considerably less than in 1937 due to a lower incidence of the typhoid-paratyphoid group of fevers and to a diminished activity among biting animals respectively. Antirabic vaccine has been distributed to 40 towns and provincial treatment-centres where 2,102 patients, bitten and at-risk have received advice and specified treatment. Canine prophylactic also has been issued on demand by the veterinary authorities.

The potency of the small-pox lymph prepared in the central laboratories has again been satisfactory. Free from extraneous organisms and of 100 per cent. potency when issued to districts its success rate has been 97.3 per cent., i.e. 40,004 successful insertions out of 41,116 primary vaccinations performed. Opportunities for research during the year have been sadly lacking and, as a result, efforts have been concentrated on better modes of preparation of anti-enterica vaccines. Other activities have included the performance of 12,844 Wassermann reactions with 830 Kahn tests in parallel series, the bi-weekly control of the Jerusalem water supply and swimming pool and the preparation of 198 autogenous vaccines.

In the entomological division the identification and classification of insects of medical importance have continued, being mainly concerned with the identification of anopheline mosquitoes in their adult and larval forms and of the ectoparasites on rats trapped at Palestinian ports. From 1,780 rats caught 6,618 fleas have been taken for examination — an infestation rate of 3.7 per rat. As usual X. cheopis is principally involved, representing 63.3 per cent. of the infestation.

In the chemical division 14,520 samples have been dealt with during 1938 as compared with 12,330 in 1937; the increase is to be accounted for by additional sampling of foods, water for irrigation and bio-chemical specimens.

Despite local conditions 8,985 samples (including milk) taken under the Public Health (Rules as to Food) Ordinance show an increase of 20 per cent. over the 1937 figure, and of the number some 5 per cent. have been either below standard or improperly labelled. An intensive sampling of butter in local packing establishments and retailers' premises has been undertaken and of the 565 samples 78 or nearly 14 per cent. have failed to conform to the requirements of the Ordinance. Of 404 samples of new season's olive oil 20 per cent. have contained more than 10 per cent. of acidity, while 6 per cent. have been adulterated.

The bio-chemical branch has dealt with 2,023 specimens, the agricultural branch with 1,581 samples of soil, water, fertilizers and agricultural products. Suitable accommodation has now been provided in the latter branch for "pot experiments" on soils and fertizers. Time has been found also for investigations on local organic manure and into the effect of irrigation with saline water.

Exhibits examined in connexion with criminal investigations have numbered 309 and have been derived from cases of suspected poisoning, traffic in dangerous drugs, shooting and bombing, arson and burnt currency notes. Veterino-legal specimens numbering 37 have been examined in 14 cases of suspected animal poisoning.

As previously, demonstrations to police personnel undergoing special training have been given by the senior laboratory officers in order that these students may become conversant with scientific criminological procedure. The laboratory staff also provides the lecturer in medical jurisprudence to the Jerusalem Law Classes and the examiner in forensic medicine for the Council of Legal Studies, and in physiology and hygiene and in chemistry for Palestine's Board of Higher Studies.

Report of work performed.

(2) The report is presented under the headings and in the order shown in the subjoined index.

A. BACTERIOLOGICAL DIVISION.

Routine Diagnosis.
Pathological Findings.
Public Health Examinations.
Medico-Legal Investigations.
Anti-Rabies (Pasteur) Institutes.
Calf-Lymph Establishment.
General Vaccine Institute.
Research.
Statistical Tables.

I. Record of Bacteriological Examinations during 1938.
II. Laboratory Findings in Malaria — 1938.
III. Anti-Rabies Services Statistics.
IV. Statement of Rabies Control in Palestine.
V. Control of Rabies — Destruction of Stray Animals.

B. ENTOMOLOGICAL DIVISION.

Routine Duties.

C. CHEMICAL DIVISION.

Summary of Work Done.

Work undertaken for Government Departments.

(a) Public Health and Medical.
(b) Police, Criminal Investigation Department.
(c) Customs, Excise and Trade.
(d) Agriculture and Development.
(e) Other Departments.
(f) Private sources.

Special Investigations.
Weights and Measures.
Statistical Tables.

A. Samples Examined during 1938.
B. Milk Analyses.
C. Chemical Service for Agriculture.

A. BACTERIOLOGICAL DIVISION.

Routine Diagnosis.

92. The number of specimens sent for examination during 1938 totalled 255,239. Details indicating the number and nature of the more important investigations, together with the most interesting findings, are summarised in Table I.

(a) *Blood Films.*

Table II shows the laboratory figures in respect of malaria for 1938. Distribution, type and incidence are to be viewed only from the laboratory standpoint, based as they are on laboratory returns from Jerusalem, Haifa and Jaffa.

9,531 blood films have been examined, and of the 1,245 positive findings 735 showed the parasite of benign tertian malaria, 485 that of malignant tertian and 25 that of the quartan form. From these figures, therefore, the percentage of relative occurrence among positive cases has been : benign tertian 59, malignant tertian 39, quartan 2. The incidence of the quartan infection is the only considerable departure from normal. The parasite of relapsing fever, Sp. recurrentis, has been met on 43 occasions, while Leishmania tropica has been found 25 times.

(b) *Blood Estimations and Enumerations.*

Erythrocyte and leucocyte enumerations have totalled 22,884, haemoglobin percentage estimation 10,594, differential counts 10,766. From 6,500 blood cultures the following pathogenic organisms have been identified to the number indicated : Bact. typhosum 258 times, Bact. paratyphosum A, B, or C 52, Br. melitensis 9, Streptococcus 11, Staphylococcus 54, Bact. coli 2, Str. pneumoniae 1.

(c) *Serological Investigations.*

(1) Diagnosis of syphilis.

12,844 specimens of blood serum have been examined by No. 1 Method of the M.R.C. and found by the Rochester Row technique to be positive on 1,575 occasions. On 830 serum specimens the Kahn test has been performed in parallel series and corroborative findings have been obtained in 130 cases. The number of examinations shown represents the highest level yet reached in these laboratories in the course of a single year.

(2) Other complement-fixation tests.

Weinberg's method has been employed in 55 cases of suspected hydatid disease in man, Besredka's test in 11 cases of suspected tuberculosis.

(3) Agglutination tests.

Estimations of agglutinin content have been made in respect of 30,089 sera. Positive reactions to the number shown within brackets have been obtained in diagnostic dilutions with the following organisms : Bact. typhosum (1,113), Bact. paratyphosum A(92), B(103), C.(19), B. asiaticus Castellani (2), Br. melitensis (38), Br. abortus (30), Proteus X19 (218).

(4) Haemagglutination.

Blood grouping tests have been performed on 3,271 occasions, partly in connexion with cases for blood transfusion, partly to maintain an adequate roster of voluntary blood donors, and partly to assist the Police Department in ascertaining the groups to which blood stains on court exhibits have belonged.

(5) Precipitin reactions.

49 blood-stained articles have been forwarded for the determination of origin of the blood. Positive corroborative and differentiating tests for blood have been obtained in 39 cases, 37 human and 2 animal (bovine).

(6) Other tests.

On 560 occasions the coagulation time has been determined, in 99 cases the sedimentation rate.

(d) *Faecal Specimens.*

Investigations carried out on stool specimens have numbered 19,413 microscopic and 8,009 cultural examinations.

The more important findings by microscopic examinations are thus summarised :—*Protozoa* : Entamoeba histolytica (free) 271, E. histoloytica (cyst) 286, Giardia intestinalis 327, Chilomastix mesnili 18, Trichomonas intestinalis 367. *Worm Ova* : *Nematodes* : Ascaris lumbricoides 1,451, Trichuris trichiura 2,041, Enterobius vermicularis 217. *Cestodes* : Taenia saginata 301, Hymenolepis nana 119, Diphyllobothrium latum 6. *Trematodes* : Heterophyes heterophyes 121, Dicrocoelium dendriticum 20.

The results of cultural examinatons have shown Bact. typhosum to be present on 25 occasions, Bact. para. A and B each on 3; among the dysentery group Bact. Flexner-Y has been isolated 178 times, Shiga 32, Strong 27, Schmitz 36, Sonne 12.

(e) *Urines.*

Microscopic examinations of urine specimens have totalled 38, 526, routine chemical investigations 46,490. From 2,447 catheter specimens the following organisms have been recovered : Bact. typhosum 16, Bact. coli 53 times. On 114 occasions the ova of Schistosoma haematobium have been discovered.

(f) *Sputa.*

Of 5,827 specimens of sputa examined microscopically 625 have contained Mycobact. tuberculosis. The Str. pneumoniae has been present in 22 sputa, while 14 cases of Blastomycosis have occurred.

(g) *Naso-Pharyngeal Swabs.*

These have numbered 7,494. Pathological findings have included C. diphtheriae 1,120 times, Spirochaeta vincenti and fusiform bacilli in 90 cases of Vncent's angina, Mycobact. leprae from 18 cases of leprosy, Str. haemolyticus on 135 occasions and N. meningitidis on 4.

(h) *Urethreal Smears.*

Of 1,923 urethreal and vaginal discharges examined microscopically 513 have contained Neisseria gonorrhoeae.

(i) *Cerebro-Spinal Fluids.*

As a result of microscopic and cultural methods carried out on the fluid obtained from 768 lumbar punctures the following organisms have been incriminated in the production of meningitic symptoms :— N. meningitidis 9 times, Str. pneumoniae, Mycobact. tuberculosis, Streptococcus and Staphylococcus on 30, 10, 21 and 31 occasions respectively.

(j) *Rabies.*

Of 54 brains extracted from animals suspected of rabies and forwarded on behalf of the Veterinary Authorities to the Central Laboratories for investigation 8 have proved to contain Negri-bodies. The biological test has been applied in 16 cases.

(k) *Miscellaneous.*

Of 399 specimens of human hair received 100 have proved to be infected with Trichophyton, 3 with Favus and 2 with Microsporon.

Of 24 spleen smears examined 2 have contained B. anthracis and 2 L. donovani.

In the 300 conjunctival exudates forwarded the Haem. Koch-Weeks has been found 85 times, the Haem. lacunatus 14 times.

In 30 cyst fluids E. histolytica has been present on 25 occasions.

Of 143 scrapings from venereal sores 19 have contained S. pallidum.

1,048 specimens of seminal fluid have been tested for the presence of viable spermatozoa.

3,919 samples of gastric juice have been investigated and the Nonne-Apelt test for globulin in cerebro-spinal fluids has been applied on 10 occasions.

288 vaccines imported from Europe by private firms have been tested for sterility; only one failed to secure entry.

Lange's colloidal test has proved of service in 3 out of 15 cases investigated.

Animal inoculation has been carried out for diagnostic purposes on 1,582 occasions. 87 Aschheim-Zondek tests have been carried out.

Such miscellaneous investigations have reached during 1938 a total of 10,900 and have covered much of the ground of general laboratory enquiry.

Histo-Pathological Findings.

93. The pathological histology of 207 morbid tissues has been investigated; included in this number are 54 specimens of nervous tissue forwarded after extraction from animals suspected of rabies.

The more important findings in specimens submitted on behalf of human beings are tabulated below :

No.	Nationality	Sex	Age	Site of tumour	Nature of growth
1	Palestinian	M.	75	Kidney	Hypernephroma
2	Palestinian	M.	19	Anus	Papilloma
3	Palestinian	F.	44	Rectum	Adenoma
4	Palestinian	F.	12	Upper lip	Rodent ulcer
5	Palestinian	M.	26	Eye	Teratoma
6	Palestinian	M.	18	Testicle	Angio-sarcoma
7	Palestinian	F.	65	Nasal fossa	Carcinoma
8	Palestinian	F.	3	Kidney	Round cell sarcoma
9	Palestinian	F.	45	Uterus	Fibromyoma
10	Palestinian	F.	38	Uterus	Fibromyoma
11	Palestinian	M.	32	Tongue	Angioma
12	Greek	F.	53	Jaw	Osteoclastoma
13	British	F.	54	Ovary	Papilligerous cystoma
14	British	M.	45	Leg	Neuroma
15	British	F.	50	Uterus	Myomata
16	Palestinian	F.	60	Forehead	Epithelioma
17	Palestinian	F.	48	Breast	Carcinoma
18	Palestinian	M.	40	Arm	Lipoma
19	Palestinian	F.	48	Uterus	Fibromyoma
20	Palestinian	F.	25	Breast	Carcinoma
21	Palestinian	M.	65	Larynx	Epithelioma
22	Palestinian	F.	13	Upper lip	Rodent ulcer
23	Palestinian	F.	38	Kidney	Cancer
24	Palestinian	F.	24	Scapula	Fibroma
25	Palestinian	M.	60	Larynx	Papilloma
26	Palestinian	M.	45	Arm	Myositis ossificans
27	Palestinian	F.	30	Uterus	Polyp
28	Palestinian	M.	70	Head	Basal cell carcinoma
29	Palestinian	F.	50	Breast	Carcinoma
30	Palestinian	F.	65	Ovary	Cystadenoma
31	Palestinian	M.	42	Skin	Osteofibroma
32	Palestinian	M.	48	Throat	Carcinoma
33	Palestinian	M.	35	Colon	Adenocarcinoma
34	Palestinian	F.	30	Uterus	Carcinoma
35	Palestinian	F.	50	Colon	Adeno-carcinoma
36	Palestinian	M.	5	Nose	Chondro-myxoma
37	Palestinian	M.	54	Limbus	Squamous cell carcinoma
38	Palestinian	F.	58	Breast	Carcinoma
39	Palestinian	F.	50	Breast	Carcinoma
40	Palestinian	F.	52	Neck	Metastases
41	Palestinian	M.	38	Gland	Sarcoma
42	Palestinian	F.	41	Uterus	Adenoma
43	Palestinian	F.	50	Abdomen	Liposarcoma
44	Palestinian	F.	30	Lip	Haemendothelioma
45	Indian	M.	35	Thyroid	Cystadenoma
46	Trans-Jordan	M.	39	Hand	Osteochondroma
47	Palestinian	F.	35	Uterus	Osteochondroma
48	Palestinian	F.	36	Uterus	Fibromyoma
49	Palestinian	M.	54	Prostate	Carcinoma
50	Palestinian	M.	80	Larynx	Epithelioma
51	Palestinian	M.	32	Inguinal canal	Sarcoma
52	Palestinian	F.	50	Breast	Carcinoma

9 tubercular lesions have been dagnosed, 4 embryonic tissues, 8 chronic inflammatory conditions of the endometrium and 4 of the testicle.

(a) *Water Examinations.*

Public Health Examinations.

94. During 1938 the number of bacteriological investigations of water samples has been 1,473. As previously such have included examinations of the products of ice-factories and of aerated water establishments. The biweekly tests carried out on the Jerusalem Public Water Supply have invariably given satisfactory results, an absence of excretal organisms from 100 c.c. being the standard set. Further the weekly examination of the Jerusalem swimming pool to determine the condition of the water at its surface and middle depth has shown a maintenance of the prescribed standard of purity, viz., an absence of coliform organisms from 10 c.c. With regard to the tests on water supply and swimming pool, the purity of which is achieved by chemical treatment and filtration, the degree of alkalinity and the content of free chlorine constitute routine estimations.

(b) *Milk Examinations.*

682 milk samples have been investigated but in no instance has the Mycobact. tuberculosis been detected by animal inoculation or otherwise. This finding (which is consonant with the laboratory records of previous years), together with the almost constant absence of tuberculosis lesions in locally raised cattle brought to the slaughter-house, emphasises the unimportance of the rôle played by the bovine type of tubercle bacillus in the dissemination of human tuberculosis.

(c) *Examination of Rats for Plague.*

In spite of considerable difficulties the departmental policy of systematic rat catching has been pursued in the port-areas of Jaffa and Haifa. During 1938 the number of rats caught and examined has been 1,780 of which Rattus norvegicus totalled 1,425, R. rattus 355. At Jaffa 773 rats have been taken, R. norvegicus numbering 521, R. rattus 252; at Haifa the total catch amounted to 1,007, R. norvegicus 904, R. rattus 103. It will thus be observed that the relative percentage of rats collected has been R. norvegicus 80, R. rattus 20, percentage figures differing considerably from those, e.g., for 1934 which showed 58.6 norvegicus and 41.4 rattus. The total number of fleas caught and examined has been 6,618, an average of 3.7 per rat. The identification of the fleas will be given in the report of the entomological division. The 1,780 rats have been all subjected to post-mortem examination and the characteristic features of rat plague sought. Microscopical examinations of the spleen have been routine and inoculation tests have been made, when considered necessary, into appropriate media.

In no case has Pasteurella pestis been found.

(d) *Examination of Cheese.*

15 samples of cheese of local production suspected of causing that number of food poisoning outbreaks have been forwarded for examination. No bacteriological or chemical reason has been assigned for the outbreaks and it is noteworthy that no symptoms followed the exhibition of the cheese to suitable laboratory animals.

(e) *Examination of Imported Shaving Brushes.*

370 shaving brushes, representing 5 per cent. of the total consignments for 1938 have been examined for B. anthracis. In addition to these examinations, however, others have been carried out on samples of bristles imported in bulk for the purpose of manufacturing shaving-brushes for export. 30 such consignments have been investigated and proved anthrax-free.

Medico-Legal Investigations.

95. The following account is concerned only with those investigations undertaken on behalf of the Police Department by the bacteriological division of the Central Laboratories. The investigations have included enquiries into the nature and origin of stains on clothing, weapons such as daggers, bludgeons, rifles and stones, on mattresses, pillows, canvas and rags, on boots, leather, earth and twigs, and have envisaged in 49 cases the performance of corroborative and differentiating tests for blood. On 37 occasions the presence of human blood has been demonstrated on such exhibits and on 2 occasions the presence of bovine. Blood grouping has been requested in 33 instances and of that number 8 have given satisfactory information. In 4 cases the blood to be examined has been obtained direct from victim or accused. Investigations have also been concerned with the examination of garments and of vaginal and anal smears for the detection of spermatozoa in cases of alleged rape and sodomy, with the identification of material expelled from the uterus, with the determination of origin of hairs and fibres and with the histopathological examination of morbid material in cases of death from unknown causes. Medico-legal investigations have also been carried out on behalf of the Trans-Jordan Government and the senior officers have on many occasions given expert evidence in Court. The part played by the Central Laboratories in the elucidation of crime will be best appreciated by reference to the subjoined analysis of the more important work performed.

Type of Exhibit	Reason for Examination	No. of articles investigated
Blood-stained articles	Determination of origin of blood	49
Blood-stained articles	Ascertainment of blood group	33
Blood specimens	For blood grouping	4
Suspicious stains	For presence or spermatozoa	18
Hairs	Whether human or animal	5
Uterine contents	Nature and type	6

The total number of investigations undertaken on behalf of the Criminal Investigation Department has thus in 1938 amounted to 115.

Anti-Rabies (Pasteur) Institutes.

(a) *General.*

96. Departmental policy in antirabic treatment is one of as complete decentralisation as possible and reference to the map attached to this report will show how the anti-rabies service caters for the needs of Palestine. The curative vaccine, a modified type of Semple's killed carbolised virus, is prepared at the Central Laboratories and issued for use in 40 treatment centres. Thus facilities for advice and treatment are provided at Jerusalem, Bethlehem, Ramallah, Hebron, Beersheba, Tel Aviv (2), Ramle, Jaffa, Majdal, Gaza, Rehovoth, Rishon-le-Tzion, Ness Tsiyona, Petah Tiqva, Kfar Saba, Herzlia, Ra'anana, Tel Mond, Haifa (2), Nesher, Acre, Binyamina, Hadera, Karkur, Pardess-Hana, Affula, Nahalal, Nazareth, Nablus, Biddya, Tulkarm, Nathania, Kfar Haim, Magdiel, Jenin, Tiberias, Tel Yosef and Safad. Although, admittedly, such a degree of decentralisation of treatment entails a certain unavoidable waste of material, this drawback is more than offset by the ease of access to treatment and this fact is reflected in the 90 per cent. attendance of the bitten population at the centres wihin the first four days after the bite. Decentralisation as thus practised accounts not only for the success but for the popularity of treatment.

During the year under review the vaccine has been taken into use for the treatment of man and animals by the Government Departments of Health and Agriculture, by the medical authorities of the Army and Air Force stationed in Palestine and and by the Government of Trans-Jordan; in addition it has been the mode of treatment adopted by the Kupat Cholim, an organisation for the relief of sickness among Jewish labourers.

During 1938 there have been prepared 157,700 c.c. of the carbolised virus and 187,510 c.c. have been distributed from stock. Altogether 2,102 bitten persons have reported for advice and help at the several treatment centres and of that total 1,949 have received curative inoculations. In addition 119 domestic animals have received treatment and 1,620 c.c. of a 5 per cent. virus suspension have been used in the prophylaxis of the Ramle Vale Hunt.

(b) *Results of Anti-Rabies Treatment.*

Table III shows the number of persons treated during the year at the 40 provincial centres supplied with the Department's vaccine — a 2 per cent. emulsion of fixed-virus (rabbit) brain killed by the combined action of heat at 37°C. and of 1 per cent. phenol over 24 hours and diluted to one-half with normal saline solution prior to use. Dosage is universal — the daily administration over a period of 14 successive days of 5 c.c. of the vaccine. It has, however, now become the practice to administer, at the discretion of the responsible medical officer, a daily 10 c.c. dosage in cases of face-bites and very serious injuries in other parts of the body; no harmful results have been observed to follow such increased dosage.

As previously recorded, 2,102 bitten persons have applied for advice regarding the danger of their wounding, and of that number 1,949 have been given the inoculations; in 573 cases, however, treatment has been discontinued after 10 days, since that period of observation of the biting animal has shown the animal to have been healthy at the time of biting. The number of persons, therefore, to whom a complete course of treatment has been administered has been

1.376 and of these 2 have died of hydrophobia. The percentage mortality, calculated on the number of cases exposed to definite risk of infection only, has been 0.15 in contrast with the 0.10 figure for 1937. Both cases fall under the category of failures of treatment, their incubation periods being 32 and 42 days respectively.

Particulars of the two fatally-ending cases are as follows:—Case 1. M.E.K., male, Arab, aged 65 years, received 2 severe wounds on head and face from a wolf which, after biting Case 2 and one other person, disappeared. Specific treatment was commenced on the day of wounding, October 1st, and continued uninterruptedly for 14 days, 10 c.c vaccine being exhibited daily. Symptons of hydrophobia developed on November 2nd and death occurred on November 6th. The incubation period was, therefore, 32 days and the duration of illness 4 days.

Case 2. S.E.E., male, Arab, aged 32 years, was bitten with moderate severity on the lower extremity through clothing by the wolf referred to under Case 1. Treatment with antirabic vaccine commenced on 1-10-38 and continued unbroken until the 14th Oct., 5 c.c. daily having been administered since the day of wounding. Symptons of hydrophobia were first observed on 12-11-39 and death took place on 16-11-38. The incubation period in this case was 42 days and the duration of illness 4 days.

(c) *Neuro-Paralytic Accidents.*

No such complication of antirabic treatment has occurred in 1938. It is noteworthy that during the past 15 years only 6 cases of post-treatment paralysis have been recorded among the 20,640 bitten persons inoculated. The incidence of this uncommon complication has therefore been but 0.29 per 1,000. Only one case, in 1937, has been recorded in the last 6 years, i.e. 1 in 10,690 treatments, representing an incidence rate of but 0.009 per mille.

(d) *Hydrophobia in Untreated Persons.*

During the year only one case of hydrophobia occurred among untreated persons.

A.A.K., male, aged 8 years, Palestine Arab, was bitten twice by a dog in the lower extremity through naked skin on 12-9-38. The wounds, which were of moderate severity, were not cauterised. On the 23rd and 24th November specific treatment was administered but thereafter the patient disappeared and remained untraced until onset of hydrophobia symptoms on 22-10-38. In this case the incubation period was 40 days and the duration of illness 1 day.

(e) *Occurrence of Rabies in Animals.*

85 cases of rabies among animals have been reported in 1938 and from the particulars published in the Veterinary Bulletins of the Department of Agriculture 13 sub-districts were shown to have been affected and 77 localities. The number of notifications falls somewhat short of the 1937 figure but this may be partly accounted for by the disturbances. The sub-districts have been variously affected; for the first time Safad heads the list of rabies areas with 24 cases and on this occasion has the percentage incidence of 28; Jaffa follows with 15 or about 18 per cent., next in order come Tulkarm, Haifa, Gaza, Jenin, Jerusalem, Nablus, Tiberias, Beersheba, Ramle, Bethlehem and Nazareth with 11, 9, 5, 5, 5, 3, 3, 2, 1, 1, and 1 respectively. The present year's 85 cases have included 61 dogs, 9 jackals, 8 cats, 5 solipeds, 1 wolf and 1 cow, representing percentages of approximately 70, 11, 10, 6, 1.5 and 1.5 Thus as in the past the dog has been mainly responsible for the continued dissemination of rabies throughout Palestine, acting as it does as the principal reservoir of infection; of the 1,376 treated persons definitely exposed to risk of rabies 1,061 or 77.10 per cent. have been bitten by dogs. Oher animals incriminated have been cats to the number of 139, wolves 3, jackals 39, solipeds 48, ruminants 13, miscellaneous such as rats (3), monkeys (4), foxes etc. 73, these other animals showing percentage figures of 10.10, 0.22, 2.86, 3.48, 0.94 and 5.30 respectively. In addition to the fact

that the dog has been responsible for 77.10 per cent. of the bites inflicted upon the population-at-risk, the dog has proved to be the biting animal in 1,504 cases out of the total 1,949 persons presenting themselves for treatment and to whom courses of injections have been administered in whole or in part,i.e. in 77.2 per cent. (72 per cent. in 1937). Other animals in this category of biting have included 198 cats, 56 jackals, 3 wolves, 68 solipeds, 16 ruminants and 103 miscellaneous, these animals accounting respectively for 10.2, 2.8, 0.15, 3.5, 0.8, and 5.35 per cent. of the bites. Of the 3 cases of hydrophobia which occurred in 1938 ,two resulted from injuries inflicted by a wolf, one followed dog-bite. In the classification of bitten persons according to the condition of the biting animal 51 have been injured by animals proved to have been rabid by laboratory investigation. As already recorded, of the 54 brains extracted from suspectedly rabid animals and forwarded by the veterinary authorities for laboratory examination 8 have been found to contain Negri bodies.

The incidence of animal rabies during 1938 has shown the highest figures in January with 12 cases, while figures for June, August, May and July have been 9, 9, 8 and 8 respectively. The lowest rate was reached in December with 2 cases.

The wide-spread occurrence of rabies in Palestine will best be appreciated by reference to the sub-joined table :—

ANIMAL RABIES DURING 1938.

Month	No. of Cases	Localities affected	Sub-Districts affected
January	12	10	7
February	6	5	3
March	5	5	3
April	6	6	5
May	8	7	3
June	9	8	5
July	8	8	6
August	9	8	6
September	7	5	3
October	7	7	4
November	6	6	4
December	2	2	2
Totals	85	77	51

(f) *Canine Prophylactic.*

A vaccine is prepared and made available for the prophylactic inoculation of dogs; it consists of a 5 per cent. suspension of carbolised killed fixed-virus (rabbit's) brain in normal saline solution and is usually administered in 3 successive daily injections of 5 c.c.. During the year 115 dogs have been satisfactorily protected, including the hounds of the Ramle Vale Hunt; these hounds, engaged in the risky venture of hunting the jackal, receive prophylactic treatment every 4 months.

The reason underlying the administration of this vaccine in a 5 per cent. suspension over 3 days instead of a 20 per cent. as a single injection is to obviate any possibility of the vaccine itself conveying infection — a prerequisite which cannot be fulfilled in certain other prophylactics. Unfortunately the relatively small number of dogs so protected precludes generalisation as to the vaccine's efficiency.

(g) *Measures of Control.*

Table V summarises that aspect of rabies control which is reflected in the destruction of dogs, cats and other animals in municipal and local council areas and in rural areas. In 1938 animals numbering 16,641 were destroyed including 12,708 dogs.

The provision of isolation kennels by municipal and local councils is dealt with in the 1934 Rabies Ordinance, the Chief Veterinary Officer approving plans and specifications. Adequate accomodation for the observation of biting animals has been made available by 22 out of the 48 councils affected.

The Ordinance further contains specific powers for the destruction of certain animals, the isolation of stray animals, the destruction of suspected animals and the declaration of areas affected with rabies by notice in the Palestine Gazette by the Chief Veterinary Officer.

(h) *Report to League of Nations.*

In common with all Pasteur Institutes this Department's Anti-Rabies Service furnishes yearly a statement of work on the prescribed pro-forma. From this special report emerge certain further items of interest in connexion with the results of antirabic treatment; a summary of the more important items follows :—

(1) The population-at-risk, 1,376 bitten persons, represents 70.60 per cent. of those who attended provincial centres for advice and treatment (1949).

(2) Of the 1,376 persons bitten and exposed to risk of rabies infection 297 or 21.58 per cent. were Europeans, 1079 or 78.42 per cent. were Non-Europeans.

(3) 2 fatal cases occurred, both non-Europeans and both bitten by the same wolf. These failures of treatment represented 0.15 per cent. of the total-at-risk.

(4) 77.10 per cent. of wounding was inflicted by dogs.

(5) 3.71 per cent of the total-at-risk were bitten by animals proved by laboratory examination to have been rabid at the time of biting.

(6) Of the wounding 7.34 per cent. belonged to the category "deep" 89.10 to the "superficial", while in 3.56 per cent. there was no visible lesion.

(7) In 68.38 per cent. of cases the wounds were inflicted on naked skin. in 31.62 per cent. through clothing A fatal case occurred in each category.

(8) Wounds were most frequent on the leg (51.89 per cent.) and on the arm (38.66 per cent.). One case of hydrophobia followed a head-bite, one a leg-bite, these representing a percentage mortality of 1.37 and 0.14 respectively.

(9) Only 7.84 per cent. were efficiently cauterised .i.e. treated within ½ hour of being bitten.

(10) 1210 bitten persons or 87.93 per cent. of the population-at-risk reported for advice and treatment within 4 days of the date of biting and a further 7.41 per cent. within the first week. These satisfactory figures afford proof of the facilities afforded in Palestine for antirabic treatment and of the value of the Department's policy of complete decentralisation of treatment.

(a) *General.*

Calf Lymph Establishment.

97. In as much as the Department's lymph stocks in November, 1937 amounted to well over one million doses it was considered unnecessary to prepare the usual annual quantities; as a result only 20 calves have been used this year instead of the normal 40-50. During the cold season calf lymph

totalling 796 grams of pulp has been produced, the equivalent of 159,200 doses. The issues during 1938 have been somewhat less than usual, 171,565 doses only having ben requested. This quantity has been required to carry out 55,422 vaccinations in Palestine. Of 41,116 primary vaccinations performed and observed 40,004 have proved successful. The high degree of potency possessed by the lymph is reflected in the 97.3 per cent. successful insertion rate.

The smaller number of vaccinations can be explained by the absence of smail-pox in neighbouring territories, by the non-invasion of Palestine by the disease and by the fact that the country's population is singularly well-protected. Prophylaxis has, therefore, been limited to routine primary and secondary vaccinations ,the latter chiefly carried out upon immigrants at the ports. The system of "hiring" instead of "buying" calves has been continued and suitable animals have been made available for £P.2.200 per head. An economy in calf-lymph production has thereby been effected, as the successful contractor has to be responsible for the calves' food and quarantine accommodation in the inclusive charge.

The lymph issued by this Department is invariably of 100 per cent. potency and of proved sterility ensured by adequate tests. Since the commencement of lymph production in 1924 the number of doses manufactured has been 5,341,736, the number of vaccinations performed nealy 2,000,000.

On no occasion has there been any record of sepsis or other unpleasant sequela after vaccination.

(b) *Cost of Production.*

(1) Statement of manufacture.

Number of calves hired	20
Number successfully vaccinated	20.
Grams of lymph pulp obtained	796.
Grams of pulp per calf	39.8
Total dosage produced	159,200
Dosage per calf	7,960.

(2) Statement of costs

	£P.Mils
Hire of 20 calves, including fodder, etc.	44.000
Cost per dose (material only)	0.0027

(c) *Sales.*

Lymph sales during 1938 have totalled £P.136.075 and as usual have been in excess of the material cost of production. The product has been sold to the Transjordan Government, the Iraq Petroleum Company and to the Military Authorities in Palestine .

(d) *Remarks.*

No case of smallpox occurred during the year. A reserve lymph stock equal in number of doses to the poulation of Palestine has been maintained. Provision of a lymph of full potency and one wholly free from extraneous organisms has been made to Government at negligible cost. Its preparation has been, as usual, undertaken by the personnel of the bacteriological division of the Central Laboratories.

(a) *Vaccines.*

General Vaccine Institute.

98. The Central Laboratories have as in previous years been responsible for the preparation, standardisation and issue of all prophylactic and curative vaccines required in the country. A considerable incidence of the enterica diseases has called for the production of the relevant vaccines on a fairly large scale.

The alterations in the type of prophylactic vaccine have been continued and extended, and with a view to combating attacks on the population by enterica organisms of unusual virulence the vaccine now in general use is one composed of Bact. typhousm Ty2, Bact. paratyphosum A (H.A.6) and B (H.B.3). It is hoped that the employment of a combination of these strains will have a marked effect on the incidence of the enterica among the inoculated. During 1938 a total dosage of 85,710 c.c. of anti-enterica vaccines has been prepared and 89,750 c.c. issued. 3,570 of anti-cholera vaccine have been manufactured and of that quantity 2,340 c.c. have been used in the protection of the Mecca pilgrimage. Of the 1,320 c.c. anti-plague vaccine produced 210 c.c. have been distributed.

Autogenous vaccines prepared as curative measures in the treatment of furunculosis and genito-urinary and respiratory infections have numbered 198.

The manufacture and issue of vaccines durnig 1938 are shown in the following table :—

Nature of vaccine	Total dosage manufactured (units or c.c.)	Total dosage issued (units or c.c.)
Calf-lymph	159,200	171,565
Anti-rabies	157,700	187,510
T.A.B.	79,300	71,360
Anti-typhoid	6,180	18,390
Anti-cholera	3,570	2,340
Anti-plague	1,320	210
Autogenous	5,940	5,940
Total unit dosage	413,210	457,315

(b) *Sera.*

Agglutinating, haemolytic and the several precipitating sera used in ordinary diagnostic methods in the Wassermann Reaction and in medico-legal investigation have been produced in the Central Laboratories. Considerable quantities of Group A and Group B sera have been obtained and tubed for use in connexion with the classification of blood-donors and medico-legal cases concerned with murder, rape, disputed paternity and the like.

The number of laboratory animals required for this branch of the work amounted to 1,207 during the year.

99. It is a matter for regret that the conditions obtaining throughout 1938 have reacted unfavourable on the carrying out of investigations connected with research problems. Indeed, little has been possible other than a continuation of the study of better methods of preparing anti-enterica vaccines and of evaluating precisely the true value of the modern technique used in the diagnosis of the enterica. Research

B. ENTOMOLOGICAL DIVISION.

100. The identification and classification of insects of medical importance have constituted part of the routine work of the Central Laboratories. Investigations have mainly been concerned with the identification of anopheline mosquitoes in their adult and larval forms and of the ectoparasites on rats trapped at Palestinian ports.

The total number of fleas taken from 1,780 rats caught during 1938 has been 6,618 — an average of 3.7 per rat; the parasitic rate is, consequently, twice as high as in 1936 and in 1937 when it was 1.8 and 1.7 respectively.

Of the 6,506 fleas identified, 5,858 have been taken on R. norvegicus, 648 on R. rattus.

The following table shows the number and nature of the fleas found on the two rat species.

FLEAS FOUND ON PORT RATS.

Fleas on 1,425 R. norvegicus		Fleas on 355 R. rattus	
Species	No.	Species	No.
X. cheopis	3792	X. cheopis	325
C. fasciatus	30	C. fasciatus	1
Leptopsylla	1876	Leptopsylla	280
Ctenocephalus	160	Ctenocephalus	42
TOTALS	5858		648

The degree of infestation is consonant with the findings of previous years: thus X. cheopis with a total of 4,117 out of 6,506 fleas identified, i.e. 63.3 per cent. is again the commonest rat flea, Leptopsylla with 2,156, representing 33.1. per cent., comes next, while Ctenocephalus and Ceratophyllus fasciatus follow with 202 and 31, or 3.1 and 0.5 per cent. respectively.

C. CHEMICAL DIVISION.

101. During the year 14,520 samples have been dealt with as compared with 12,330 in 1937. The increase is accounted for by additional sampling of foods, water for irrigation, and biochemical specimens. A considerable volume of advisory work has been undertaken which is not shown in table A.

(a) *Public Health.*

(1) Foods and Drugs.

In spite of the disturbed state of the country which resulted in a curtailment of the food sampling in many of the markets the total of 8,985 samples (including milk) shows an increase of approximately 20 per cent. on the previous year.

The following table shows the results of food sampling during the year excluding food condemned as unfit on inspection.

Nature of Sample	Number of samples	Below Standard	
		Number	Percentage
Fresh milk	4,945	137	2.8
Condensed milk	519	25	4.8
Dried milk	16	2	12.5
Cream	1	0	0.0
Butter	565	78	13.8
Semni	1,547	39	2.5
Cheese	9	0	0.0
Olive Oil	404	80	19.8
Sesame Oil	122	18	14.7
Other oils & fats	172	16	9.3
Coffee	178	13	7.3
Honey	65	12	18.5
Vinegar	14	6	4.2
Jam	68	27	39.7
Flour	11	0	0.0
Soda water and lemonades	38	1	2.9
Cordials, Syrups and ingredients for jam making	44	0	0.0
Citrus wine	6	0	0.0
Miscellaneous	14	0	0.0
TOTAL	8738	454	5.2%

Milk and milk products and edible oils and fats again comprise the majority of the samples. Coffee, jam and honey have been given special attention. The adulteration in coffee is usually roasted peas or cereals. The adulterants in jam have included apple pulp, apricot pulp, starch and agar. The Foods Ordinance defines jam as some kind of fruit or fruits boiled with sugar. The kinds of fruit must be stated on the label and the addition of pectin, fruit juice and glucose is permitted. The cheaper jams are little more than pectin jelly coloured and flavoured.

Various kinds of so-called artificial honey have been examined. Some have been cane or glucose syrups but others have been definite imitations of genuine honey made from invert sugar to which a honey flavour has been added. The colour tests for artificial invert are not always positive in these. The Senior Poultry and Bee-keeping Officer of the Department of Agriculture and Fisheries reports that the introduction of standards and analytical control appears to have improved the situation.

(2) Drinking Water.

Of the 790 samples shown in table A, 111 have been examined for fitness for drinking; the Jerusalem supply from Ras-el-Ain has been subject to regular control.

(3) Bio-chemical Specimens.

The 2,023 specimens under this head represent an increase of 7 per cent. over 1937. Of these specimens 222 have been from official sources and the remainder from private hospitals and practitioners.

The number of determinations totalled 2,390. From 1,385 bloods submitted 968 were examined for sugar, 462 for urea, 112 for uric acid, 23 for calcium, 14 for rest nitrogen. Other determinations included cholesterol, chlorides, bilirubin, diastase, acetone, xanthoprotein, indican, phosphates and arsenic.

The urines amounted to 521 and were examined for acetone, diacetic acid, urea, uric acid, diastase, bilirubin, urobilin, urobilinogen, indican and lactose.

66 gastric juices were examined for free acidity, total acidity and lactic acid, 9 urinary calculi for determination of composition, 33 cerebro-spinal fluids for sugar, 6 stools for total fat, free and combined fatty acids and 3 human milks for lactose, fat and protein.

(b) *Police Department.*

(1) Suspected poisoning.

In connection with 8 cases of suspected human poisoning 52 specimens have been examined. The positive findings have included veronal (2 cases); luminal (1 case); morphine (1 case); arsenic (1) case.

Cases of animal poisoning are classified under "Agriculture".

(2) Traffic in dangerous drugs.

The exhibits under this head totalled 89 and included hashish, cocaine, and opium. 4 specimens of novocaine have been submitted as suspected cocaine. In one case where a "nargileh" (hubble-bubble pipe) had been submitted it was possible to get a good positive Beam's test for hashish on petroleum ether washings from the bowl and stem of the pipe.

(3) Shooting and bombing.

25 exhibits under this heading have been examined. These were largely substances suspected of being explosives within the meaning of the Emergency Regulations. They included picric acid (lyddite), T.N.T., black powder, sodium nitrate, and potassium chlorate.

Within the meaning of the Emergency Regulations many substances (such as nitrates), which are not in themselves explosive, are classified as explosives for the purpose of restrictions on import, sale, and possession.

(4) Arson.

In 13 cases of suspected arson 37 specimens have been examined; in most of these the use of kerosene had been suspected.

(5) Burnt currency notes.

In a claim for payment on the charred remains of alleged currency notes the inscriptions could be identified on many of the notes by completing the ashing process and after prolonged search 27 different numbers on notes were read and recorded.

(c) *Customs, Excise and Trade.*

The samples examined under this head have totalled 3,391. These include 541 samples of alcoholic liquors and ingredients and in this connextion it has been noted that the use of arsenical insecticides in the vineyards can result in contamination of the wine. In some cases such wines have been successfully treated with iron oxide.

Samples of foods taken in Customs are included in the Table under Public Health. They number 1,986 and include semni 1,219 and condensed milk 507. All the better-known brands of condensed milk now comply with the new regulations.

A drawback on sugar exported in composite goods has now been introduced and has involved the analysis of 66 samples.

Under the Methylated Spirits Ordinance, 1932, samples of denaturants have been examined.

Much advisory work has been undertaken in connexion with classifications under the Customs Tariff and 64 patents specifications have been dealt with for the Registrar.

(d) *Department of Agriculture and Fisheries, Development Department and Geological Adviser.*

The samples total 1,581 which is an increase of 56 per cent., over the previous year. This increase is due largely to the survey for the development of the Beersheba area and Trans-Jordan. Details will be found in Table C.

The necessary standard solutions have been supplied for the acid : sugar maturity tests carried out by the fruit inspection service.

Samples of fruit have been examined for spray residues containing arsenic, barium silicofluoride and borax.

Several investigations have been undertaken and these are included under Special Investigations.

Veterino-legal specimens numbering 37 have been examined in 14 cases of suspected animal poisoning. The findings have been all negative with the exception of one case which was positive for arsenic.

(e) *Other Departments.*

Work has been carried out for Railways, Public Works, Posts and Telegraphs, Central Tenders Board, Jerusalem Municipality, H.M. Forces and Trans-Jordan Government.

(f) *Private Sources.*

A total of 1894 samples has been examined under this heading of which 1793 have been bio-chemical specimens. The remainder has included, soils, water, minerals, fertilizers and foods.

3. SPECIAL INVESTIGATIONS.

(1) Further work has been done on the influence of absorption ions and neutral salts on the pH. of soils.

The observation that the pH. is lowered on the addition of a neutral salt to the soil is valid for arid soils as well as for humid. All the processes which render humid soils unsaturated take place also in arid climates but to a lesser degree.

(2) Experiments have been carried out on the effect of saline water on the "loess" type soils of the Beersheba area. Under the laboratory conditions there was little accumulation of salt by evaporation but base exchange produced alkalinity. In spite of the fact that the soil was highly calcareous the water used in this case was very saline containing 300 parts per 100,000 chlorine.

The following papers were published during the year on Agricultural subjects.

(1) F. Menchikowsky and M. Puffeles. The Relation of Exchangeable Cations to the Active Aluminium in Soil "Soil Science" Vol. 45 No. 1 1938.

(2) M. Puffeles and S. Adler. The Effect of Sheep and Goat Manure on some Mediterranean Red Soils "Soil Science", Vol. 46 No. 4 1938.

TABLE I.

RECORD OF BACTERIOLOGICAL EXAMINATIONS PERFORMED DURING 1938.

Nature of Specimen	Total Examinations	Nature and Number of Positive Findings	
Blood Films	9,531	P. vivax	735
		P. malariae	35
		P. falciparum	485
		Spironema recurrentis	43
		L. tropica	25
Blood Cultures	6,500	Bact. typhosum	258
		Bact. paratyphosum A	35
		Bact. paratyphosum B	16
		Streptococcus pyogenes	11
		Staphylococcus	54
		Br. melitensis	9
Cell enumerations	22,884	—	—
Haemoglobin index	10,594	—	—
Differential counts	10,766	—	—
Coagulation-time determinations	560	—	—
Sedimentation rate	99	—	—
Histological sections	207	—	—
Water investigations	1,473	—	—
Milk investigations	682	—	—
Sputa	5,827	Mycobact. tuberculosis	625
		Str. pneumoniae	22
		Blastomycosis	14
Naso-pharyngeal swabs	7,494	C. diphtheriae	1120
		S. vincenti	90
		Str. haemolyticus	135
		B. leprae	18
		Staphylococcus	230
Rats for plague	1,780	Past. pestis	0
Serum Reactions			
(a) Agglutinations	30,809	Bact. typhosum	1113
		Bact. paratyphosum A	92
		Bact. paratyphosum B	103
		Bact. paratyphosum C	19
		Br. melitensis	38
		Br. abortus	30
		Proteus X19	218
		Enteric (type not diff.)	48
		B. asiaticus Castellani	2
(b) Diagnosis of Syphilis			
Wasserman Reaction	12,884	—	1575
Kahn's Reaction	830	—	130
(c) Isohaemoagglutination	3,271	—	—
(d) Complement-Fixation Tests			
Besredka's	11	—	—
Weinberg's	55	—	—
(e) Precipitin Tests	87	—	—

Nature of Specimen	Total Examinations	Nature and Number of Positive Findings	
Faeces			
(a) Microscopical Examinations	19,413	E. histolytica (free)	271
		E. histolytica (cyst)	286
		Giardia intestinalis	327
		Chilomastix mesnili	18
		Trichomonas intestinalis	367
		WORM OVA:	
		Ascaris lumbricoides	1451
		Trichuris trichiura	2041
		Enterobius vermicularis	217
		Trichostrongylus	4
		Ankylostoma duodenale	140
		Dibothriocephalus latus	6
		Taenia saginata	301
		Hymenolepis nana	119
		Schistosoma mansoni	131
		Heterophyes heterophyes	121
		Dicrocoelium	20
(b) Cultural-Examinations	8,009		
		Bact. typhosum	25
		Bact. paratyphosum A	3
		Bact. paratyphosum B	3
		Bact. dysenteriae Shiga	32
		Bact. dysenteriae Flexner-Y	178
		Bact. dysenteriae Schmitz	27
		Bact. dysenteriae Strong	36
		Bact. dysenteriae Sonne	12
Urines			
(a) Chemical	46,490	—	—
(b) Bacteriological	2,477	Bact. typhosum	16
		Bact. coli	53
(c) Microscopic	32,526	S. haematobium ova	114
Urethral Smears	1,932	N. gonorrhoeae	513
Rabies			
(a) Microscopic Examinations	54	Negri bodies	8
(b) Biological Tests	16	—	8
Transudates and Exudates			
(a) Abscess pus	1,253	Pyogenic organisms	123
(b) Conjunctival exudates	179	Haem. Koch-Weeks	85
		Haem. lacunatus	14
		N. gonorrhoeae	116
		Str. pneumoniae	32
		S. diphteriae	42
(c) Pleural fluid	203		
(d) Cyst fluid	80	Echinococcus	0
(e) Lumbar puncture	768	N. meningitidis	9
		Str. pneumoniae	30
		Myco. tuberculosis	10
		Streptococcus	21
		Staphylococcus	31
(f) Syphilitic	143	S. pallidum	19
Substances other than above submitted for examination			
Shaving brushes	400	B. anthracis	0
Autovaccines	198	—	—
Medico-legal exhibitis	115	—	—
Vaccine for sterility	288	—	—
Fleas	8,618		100
Hair	399	Trichophyton	—
		Favus	3
Gastric juice	3,919	—	—
Aschheim-Zondek Tests	87	—	—
Seminal Fluid	1,048	Viable spermatozoa	144
Colloidal Gold Tests	15		—

TABLE II.

LABORATORY FINDINGS IN MALARIA, 1938

(From 9,531 examinations).

Type and Locality	January	February	March	April	May	June	July	August	September	October	November	December	Total	Yearly
BENIGN TERTIAN MALARIA														
Jerusalem	4	6	10	4	17	33	35	70	83	53	24	28	367	
Jaffa	16	9	19	16	8	14	21	43	46	42	6	11	251	
Haifa	6	—	3	6	7	4	17	21	23	11	15	4	117	
Total recorded	26	15	32	26	32	51	73	134	152	106	45	43		735
MALIGNANT TERTIAN MALARIA														
Jerusalem	7	4	3	1	—	3	12	30	70	71	17	23	241	
Jaffa	4	1	—	2	2	5	9	19	25	50	19	10	146	
Haifa	2	3	—	—	—	4	10	18	27	25	3	6	98	
Total recorded	13	8	3	3	2	12	31	67	122	146	39	39		485
QUARTAN MALARIA														
Jerusalem	—	—	—	1	—	—	—	—	1	—	1	—	3	
Jaffa	7	6	—	—	4	—	—	1	—	—	—	—	18	
Haifa	—	—	—	—	—	—	1	—	2	1	—	—	4	
Total recorded	7	6	—	1	4	—	1	1	3	1	1	—		25
Total Monthly Findings (all forms)	46	29	35	30	38	63	105	202	277	253	85	82		1245

Table III.

ANTI-RABIES INSTITUTE STATISTICS.

January 1st. to December 31st., 1938.

1. General Classifications.

Number of bitten persons treated at 40 Anti-Rabies Centres	1949
Number of interrupted or unnecessary courses of treatment, biting animals remaining well after a period of 10 days' observation	573
Number of treatments carried out regularly and completely	1376
Cases of hydrophobia occurring after 14 days of the completion of treatment i.e. failures	2
Cases of hydrophobia occurring during treatment or within 15 days of its completion	0
Total mortality rate; calculated on all deaths among patients who ran definite risk of infection	0.15
Failure rate	0.15

2. Classification of Bitten Person According to Species of Biting Animal :—

Dogs	1504	Solipeds	68
Cats	198	Ruminants	16
Jackals	56	Other animals	103
Wolf	3		

3. Classification According to Condition of Biting Animal :—

A. Proved rabid by experiment	51
B. Certified rabid clinically	0
C. Suspected to be rabid	1325
D. Not suspected to be rabid	573

4. Classification According to Location of Bite :—

Head and Face	103
Upper Extremity	753
Lower Extremity	1012
Body	81

5. Classification According to Severity of Bite :—

Severe	142
Slight	1735
Not visible	72

6. Interposition of Clothing :—

On naked skin	1332
Through clothing	617

7. Whether Cauterized or not within half an hour after Bite :—

Cauterized	153
Not cauterized	1796

8. Number of Days after Bite or Contact when Treatment was Begun :—

0—4	1715
5—7	144
8—14	79
15—21	8
Over 21	3

9. Occurence of Paralytic Accident :— Nil.

TABLE IV.— STATEMENT OF RABIES AND ITS CONTROL IN PALESTINE DURING 1938.

CENTRE FOR TREATMENT G. = Government Centre K. C. = Kupat Cholim Centre	Bitten Persons		BITING ANIMALS																											
			SPECIFICATION													CONDITION					DISPOSAL									
																Definitely rabid					Killed				Ran away				Kept under observation	
	No. applying for advice and aid	No. actually treated	Weasels	Cats	Dogs	Foxes	Jackals	Horses	Donkeys	Camels	Cows	Monkeys	Rats	Unknown	Total number of animals	By laboratory investigation	Clinically	Suspected rabid	Healthy	No information available	Rabid	Suspected	Healthy	No information available	Rabid	Suspected	Healthy	No information available	Died within 10 days	Remained healthy
Jerusalem (G)	306	184	—	39	131	—	—	—	3	2	—	4	3	—	182	—	—	7	74	101	—	4	—	—	—	—	—	101	3	74
Bethlehem (G)	27	3	—	—	2	—	—	—	—	—	—	—	—	—	2	—	—	2	—	—	—	—	—	—	—	2	—	—	—	—
Hebron (G)	43	43	—	6	31	—	—	—	—	1	—	—	—	—	38	—	—	22	3	13	—	2	—	—	—	1	—	32	—	3
Ramallah (G)	5	5	—	—	5	—	—	—	—	—	—	—	—	—	5	—	—	1	—	4	—	2	—	—	—	1	—	2	—	—
Beersheba (G)	17	17	—	1	12	—	—	1	2	1	—	—	—	—	17	1	—	—	2	14	1	—	—	—	—	—	—	14	—	2
Jaffa (G)	142	142	—	18	102	—	5	1	6	1	—	—	7	—	140	—	—	—	31	109	—	2	—	—	—	—	—	107	—	31
Tel Aviv (G)	197	197	—	24	153	—	—	8	1	—	—	—	9	1	196	1	—	—	67	128	1	2	—	—	—	—	—	126	—	67
Tel Aviv (K.C.)	40	39	—	7	25	—	—	3	1	—	—	1	—	—	37	—	—	—	—	37	—	2	—	—	—	—	—	35	—	—
Ramle (G)	87	87	—	4	79	—	1	—	1	—	—	—	—	—	85	—	—	7	5	73	—	7	—	—	—	—	—	73	—	5
Majdal (G)	21	21	—	—	14	—	1	—	—	—	—	—	—	2	17	—	—	—	—	17	—	2	—	—	—	—	—	15	—	—
Gaza (G)	55	51	—	1	47	—	—	—	1	—	—	—	—	—	49	2	—	7	4	36	2	1	—	—	—	7	—	35	—	4
Rehovoth (K.C.)	5	5	—	3	1	—	—	—	—	—	—	—	1	—	5	—	—	—	—	5	—	—	—	—	—	—	—	5	—	—
Rishon-le-Tsiyon (K.C.)	14	14	—	2	10	—	—	—	—	—	—	—	2	—	14	—	—	—	—	14	—	—	—	—	—	—	—	14	—	—
Ness-Ziona (K.C.)	4	3	—	—	2	—	—	—	—	—	—	—	—	1	3	—	—	—	1	2	—	—	—	—	—	—	—	2	—	1
Petah Tiqva (K.C.)	99	99	—	11	60	1	3	3	1	—	—	1	7	—	87	—	—	—	26	61	—	4	—	—	—	—	—	57	—	26
Kfar Saba (K.C.)	27	27	—	6	15	—	2	—	3	—	—	—	1	—	27	—	—	—	15	12	—	—	—	—	—	—	—	12	—	15
Herzlia (K.C.)	18	18	—	2	13	—	1	1	1	—	—	—	—	—	18	—	—	—	9	9	—	1	—	—	—	—	—	8	—	9
Ra'anana (K.C.)	16	16	—	—	16	—	—	—	—	—	—	—	—	—	16	—	—	—	3	13	—	1	—	—	—	—	—	12	—	3
Tel Mond (K.C.)	27	27	—	3	22	—	1	—	1	—	—	—	—	—	27	—	—	—	6	21	—	2	—	—	—	—	—	19	—	6
Haifa (G)	278	277	—	26	185	—	4	4	4	—	3	5	43	—	274	6	—	5	46	217	6	23	—	—	—	—	—	196	3	46
Haifa (K.C.)	90	90	—	12	63	—	—	4	2	—	—	—	9	—	90	—	—	1	6	83	—	3	—	—	—	—	—	81	—	6
Nesher (K.C.)	7	7	—	2	4	—	—	—	—	—	—	—	1	—	7	—	—	—	—	7	—	—	—	—	—	—	—	7	—	—
Acre (G)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Benjamina (K.C.)	11	11	—	—	11	—	—	—	—	—	—	—	—	—	11	—	—	1	1	9	—	—	—	—	—	—	—	9	1	1
Hedera (K.C.)	36	36	—	4	26	—	—	—	—	—	—	—	3	—	33	1	—	—	5	27	1	6	—	—	—	—	—	21	—	5
Karkur (K.C.)	9	9	—	1	7	—	—	—	—	—	—	—	—	—	8	—	—	1	—	7	—	1	—	—	—	—	—	7	—	—
Pardess Hanna (K.C.)	9	9	—	1	8	—	—	—	—	—	—	—	—	—	9	—	—	1	1	7	—	2	—	—	—	—	—	7	—	—
Affuleh (K.C.)	2	2	—	—	2	—	—	—	—	—	—	—	—	—	2	—	—	—	—	2	—	1	—	—	—	—	—	1	—	—
Nahalal (K.C.)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Nazareth (G)	25	25	—	1	20	—	—	—	—	—	—	—	1	—	22	—	—	—	8	14	—	4	—	—	—	—	—	10	—	8
Nablus (G)	140	140	—	8	101	—	3	3	5	2	—	—	—	1	123	—	—	—	41	82	—	7	—	—	—	—	—	75	—	41
Biddia (G)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tulkarm (G)	102	102	—	4	79	—	14	—	—	1	—	—	—	1	99	—	—	23	15	61	—	11	—	—	—	14	—	58	1	15
Nathania (K.C.)	23	23	—	1	15	—	3	—	—	2	—	—	—	—	21	—	—	1	6	14	—	—	—	—	—	1	—	13	1	6
Kfar Khaim (K.C.)	5	5	—	1	1	—	—	—	—	—	—	—	1	—	3	1	—	—	—	2	1	1	—	—	—	—	—	1	—	—
Magdiel (K.C.)	36	36	—	7	26	—	1	—	—	—	—	—	1	2	35	—	—	—	—	35	—	—	—	—	—	—	—	35	—	—
Jenin (G)	24	24	—	—	28	—	—	—	1	—	—	—	—	—	24	—	—	—	—	24	—	—	—	—	—	—	—	24	—	—
Tiberias (G)	98	98	—	2	90	—	—	—	—	—	1	—	3	—	96	2	—	5	10	79	2	2	—	—	—	—	—	79	3	10
Tel Yosef (K.C.)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Safad (G)	57	57	1	—	49	—	—	—	1	1	—	—	—	1	53	2	—	3	—	48	2	5	—	—	—	1	—	45	—	—
TOTAL	2102	1949	1	197	1450	1	39	28	34	11	4	11	92	7	1875	16	—	87	385	1387	16	98	—	—	—	27	—	1338	12	384

TABLE V.

CONTROL OF RABIES

DESTRUCTION OF DOGS, CATS AND WILD ANIMALS, (JACKALS, FOXES, ETC.)

1ST JANUARY TO 31ST DECEMBER, 1938.

Sub-District	Municipal & Local Council Areas			Rural Areas			Total
	Dogs	Cats	Others	Dogs	Cats	Wild Animals	
Jerusalem	1,153	32	—	167	—	—	1352
Ramallah	58	14	—	493	22	—	587
Bethlehem	69	1	—	180	—	—	250
Jericho	49	8	5	197	—	143	402
Hebron	3	—	—	677	80	—	760
Jaffa	2,430	2670	—	602	213	190	6105
Ramle	311	6	—	386	—	317	1020
Gaza	149	13	—	394	—	—	556
Beersheba	151	7	—	205	—	—	363
Nablus	96	—	—	86	—	38	220
Jenin	57	—	—	134	—	28	219
Tulkarm	204	5	18	507	—	—	734
Haifa	1,464	35	—	287	—	—	1786
Acre	22	—	—	—	—	—	22
Tiberias	116	43	—	308	8	—	475
Nazareth	64	4	—	132	—	—	200
Beisan	55	—	—	406	1	32	494
Safad	153	—	—	943	—	—	1096
	6,604	2838	23	6104	324	748	16641

SUMMARY:

Dogs	12,708
Cats	3,162
Wild-animals	771
TOTAL	16,641

TABLE A.

SAMPLES EXAMINED DURING 1938.

Material	January	February	March	April	May	June	July	August	September	October	November	December	Total
Milks	427	409	446	452	476	490	477	482	379	329	270	308	4,945
Foods	251	313	330	609	645	414	331	321	210	171	195	250	4,040
Alcoholic Liquors	59	25	81	—	52	91	26	—	30	45	29	120	558
Non-Alcoholic Beverages	6	1	1	7	7	7	9	13	13	7	—	2	73
Drugs and Disinfectants	—	1	5	—	6	—	11	6	—	8	8	2	47
Bio-Chemical Specimens	171	168	175	146	211	202	178	159	173	135	140	165	2,023
Medico-Legal & Chemico-Legal	32	22	23	37	24	39	26	36	6	31	7	25	308
Waters	105	31	42	34	69	131	56	66	106	17	35	98	790
Minerals, Soils, Fertilizers, and Feeding Stufs.	44	56	50	11	130	34	50	92	11	86	59	54	677
Commercial Products	148	100	99	174	72	74	73	75	49	78	42	40	1,024
Miscellaneous	—	—	—	—	—	6	3	5	—	19	2	—	35
TOTAL	1,243	1,126	1,252	1,470	1,692	1,488	1,240	1,255	977	926	787	1,064	14,520

Table B.

MILK ANALYSIS IN THE CENTRAL LABORATORIES AND DISTRICTS, 1938

District	Number of Samples	Number of Procecution
Jerusalem		
Hospital Supplies	223	24
Street Vendors	420	
Jaffa		
Hospital Supplies	37	23
Street Vendors	681	
Ramle		
Hospital Supplies	—	6
Street Vendors	177	
Gaza		
Hospital Supplies	55	1
Street Vendors	231	
Tulkarm	—	—
Haifa		
Hospital Supplies	23	64
Street Vendors	759	
Acre	256	1
Nablus		
Hospital Supplies	344	3
Street Vendors	266	
Tiberias	309	—
Hebron	70	1
Bethlehem		
Hospital Supplies	151	12
Vendors	420	
Ramallah	269	2
Beersheba		
Hospital Supplies	23	—
Vendors	47	
Safad		
Hospital Supplies	79	—
Vendors	105	
Total	4,945	137

Table C.

CHEMICAL SERVICE FOR AGRICULTURE.

Source.

Nature of Samples	Dept. of Agricult.	Dept. of Develop.	Geological Adviser	Other Official Sources	Private Sources	Total Samples	Determinations
Soils	239	172	—	102	3	516	4909
Fertilizers	8	—	—	—	9	17	51
Waters	6	550	9	87	2	654	2688
Honey	—	—	—	55	—	55	401
Olives	2	—	—	—	—	2	6
Minerals	1	—	16	—	—	17	96
Veterino-Legal Specimens	35	—	—	4	1	40	71
Poultry Foods	—	—	—	—	1	1	3
Fruit	2	—	—	40	2	44	79
Flour	—	—	—	5	—	5	25
Tobacco	—	—	—	1	—	1	2
Sand	—	100	—	—	—	100	868
Castor Seeds	—	—	—	1	—	4	7
Beets	73	—	—	—	—	73	146
Carrots	7	—	—	—	—	7	14
Sulphur	1	—	—	—	1	2	6
Citrus Wine	—	—	—	6	6	12	18
Grit	2	—	—	—	—	2	20
Ginger Syrup	—	—	—	1	—	1	1
Lecitin Vegetable oil	—	—	—	1	—	1	1
Ingredients	—	—	—	2	—	2	4
Rock-Phosphates	—	—	—	3	—	3	15
Sewage	12	—	—	—	—	12	24
Insecticides	13	—	—	—	—	13	21
Total	401	822	25	308	25	1584	9476

APPENDIX

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